Arctic Marine Phytoplankton Contributed to the Sediments in Frobisher Bay

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ABSTRACT

Hsiao, Stephen I.C. and Nadia Pinkewycz. 1985. Arctic marine phytoplankton contributed to the sediments in Frobisher Bay. Can. Data Rep. Fish. Aquat. Sci. 539: v + 106 p.

The sedimentation rates and species composition of phytoplankton contributed to the sediments were determined over a period of 4 years in Frobisher Bay. The minimum rate of deposition occurred during the early part of the ice season, increased as the ice thickened and reached a maximum after the bloom at the beginning of the open water season in the first two weeks of August. Two hundred and eleven (211) species of phytoplankton were identified during the study period. The diatoms were represented by 174 species (31 centric and 143 pennate), the dinoflagellates by 12 species, the green algae by 10 species, the golden-yellow algae by 9 species, the euglenoids by 3 species, the blue-green algae by 2 species and cryptomonads by a single species.

Key words: sedimentation rates, species composition, sediments, arctic, phytoplankton.

RESUME

Hsiao, Stephen I.C. and Nadia Pinkewycz. 1985. Arctic marine phytoplankton contributed to the sediments in Frobisher Bay. Can. Data Rep. Fish. Aquat. Sci. 539: v + 106 p.

Les vitesses de sédimentation et la composition spécifique du phytoplancton relevé dans les sédiments ont été étudiées pendant quatre ans dans la baie de Frobisher. La vitesse de sédimentation était minimale au début de la saison des glaces, puis augmentait au fur et à mesure que la glace épaississait et atteignait un maximum après la période de prolifération, au commencement de la saison des eaux libres, soit durant les deux premières semaines d'août. Deux cent onze espèces de phytoplancton ont été dénombrées pendant la durée de l'étude, dont 174 espèces de diatomées (31 espèces de diatomées centriques et 143 espèces de diatomées pennées), 12 espèces de dinoflagellés, 10 espèces d'algues vertes, 9 espèces d'algues chrysophytes, 3 espèces d'euglénidés, 2 espèces d'algues bleues et une seule espèce de cryptomonades.

ACKNOWLEDGEMENTS

Special thanks are extended to E.G. Atkinson for collecting the sediment samples for this study. The illustration of the sediment trap is used with the consent of J.W. Wacasey.

INTRODUCTION

Marine phytoplankton are the most important primary producers at the base of the marine food chain. They are the most abundant and widely distributed form of plant life on earth (Ryther, 1959). The sinking of phytoplankton to the bottom in coastal waters provides an important source of organic matter for zoobenthos (Stephens et al., 1967). The quantity and species composition of the phytoplankton are of great importance to the herbivorous benthic fauna (Hargrave, 1970; Jonasson, 1972; Nicotri, 1977). Different phytoplankton species show different seasonal timing of their maximal populations. This may subsequently affect the distribution, abundance and composition of the secondary producers. These in turn are eaten by many carnivores and are an important food source for fish.

The data presented in this report deal primarily with species composition, and quantify the natural rate of phytoplankton input as a source of food for zoobenthos in the arctic coastal waters of Frobisher Bay.

MATERIALS AND METHODS

The study was conducted in upper Frobisher Bay which is separated from the lower Bay by a series of islands. The oceanography is dominated by semidiurnal tides with a maximal range of 12 m (Dunbar, 1958). Station depths ranged from 25 to 44 m during the study period. Sediment traps (Fig. 1) designed by J.W. Wacasey and E.G. Atkinson, were deployed on the bottom at station 41 (Fig. 2) to measure rate of fallout and amount of detritus reaching the bottom community. Subsamples from the detrital collections were used to identify and measure the sedimenting phytoplankton during ice and open water seasons from 1982 to 1985. Samples of phytoplankton were also obtained from intertidal trap collections (1982) and from suspended traps at a depth of 20 m (1984). The traps were retrieved after various time intervals ranging from 11 to 600 h. Subsamples of 50 ml were immediately preserved with neutral formalin at a final concentration of 2% in Boston round polyethylene bottles. They were quantitatively analysed for species composition and abundance by the method of Hsiao (1979). The sedimentation rates were then calculated and expressed as number of cells per square metre per day.

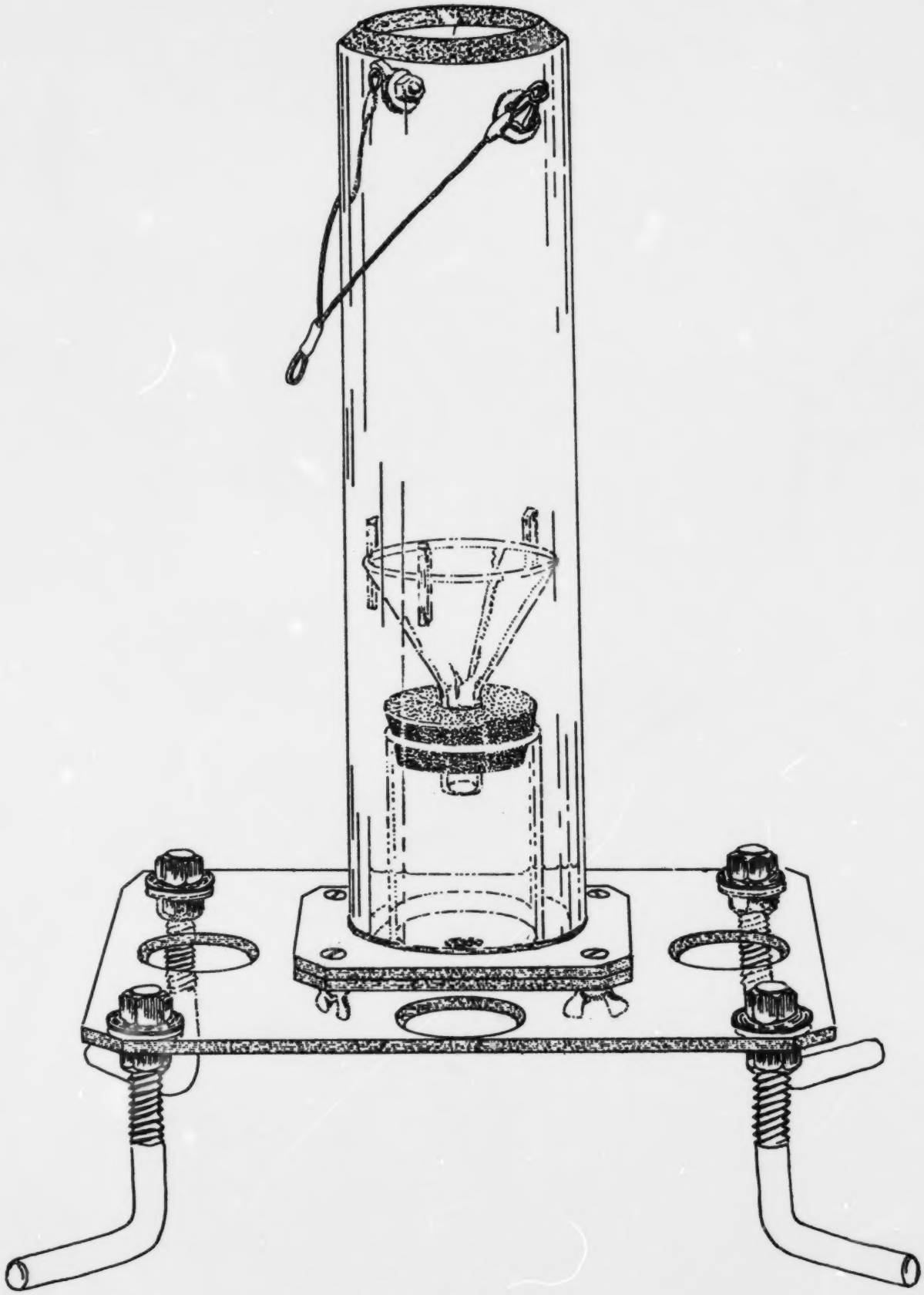

Fig.1. Structure of the sediment trap.

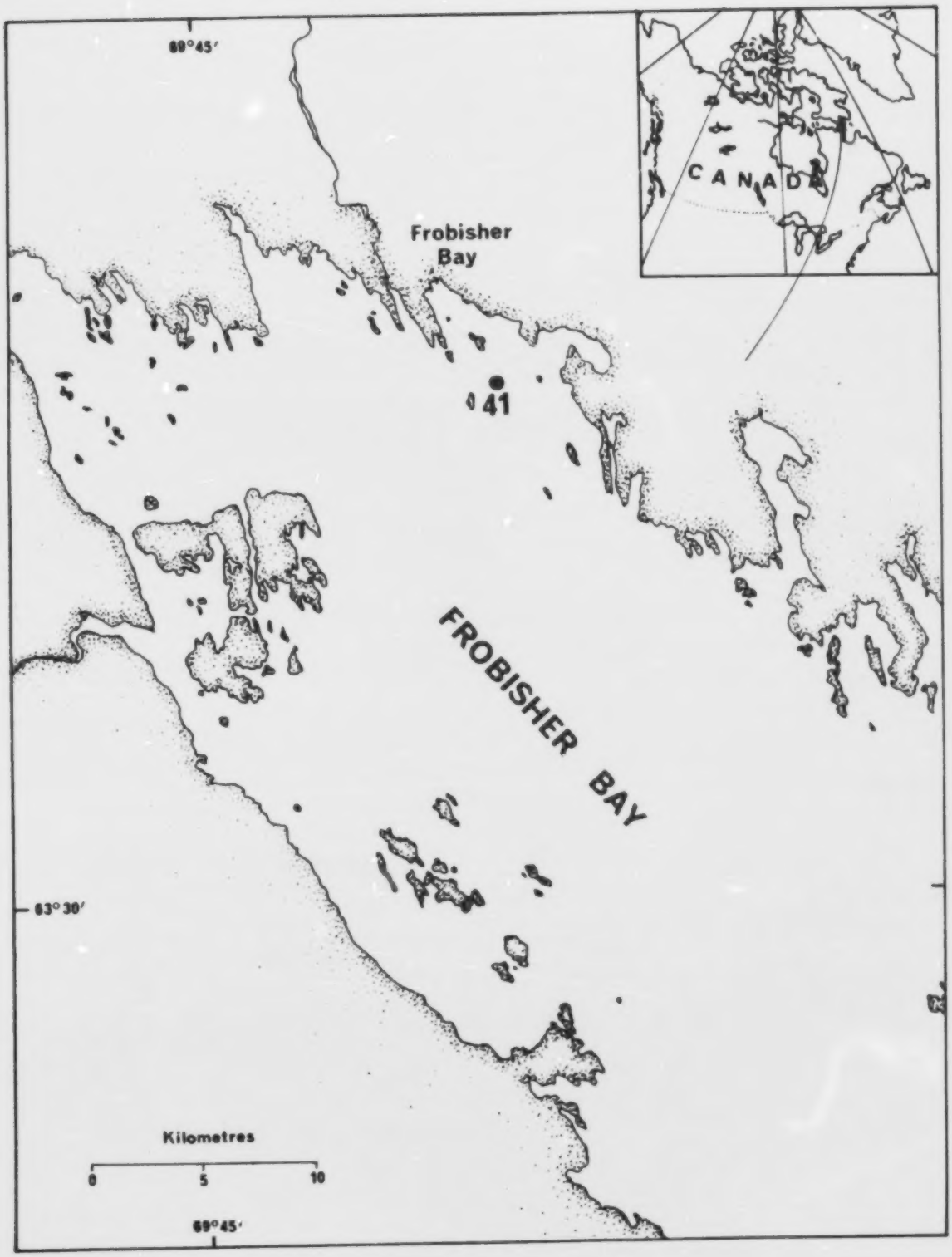

Fig.2. Map showing station location in Frobisher Bay.

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Table 1. Phytoplankton taxa found in the sediment trap samples from Frobisher Bay 1982-1985.

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
Bacillariophyta (diatoms)				
Centrales				
Biddulphia aurita (Lyngbye) Brēbisson et Godey	X		X	X
Chaetoceros affinis Lauder		X	X	X
C. borealis J.W. Bailey	X			X
C. brevis Schütt	X			X
C. decipiens Cleve	X	X	X	X
C. fragilis Meunier		X		
C. furcellatus J.W. Bailey	X	X	X	X
C. holsaticus Schütt	X	X		X
C. lauderi Ralfs		X		X
C. septentrionalis Oestrup	X	X	X	X
C. teres Cleve				X
C. wighami Brightwell			X	X
Coscinodiscus angustelineatus Schmidt				X
C. apiculatus Ehrenberg	X			
C. furcatus Karsten				X
C. lacustris var. septentrionalis (Grunow) Rattray	X		X	X
Cyclotella striata (Kützing) Grunow	X	X		X
Ditylum brightwellii (T. West) Grunow				X
Leptocylindrus danicus Cleve				X
Melosira arctica (Ehrenberg) Dickie				X
M. islandica O. Muller	X	X		X

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
M. italica (Ehrenberg) Kützing	X			
Rhizosolenia Ehrenberg				X
Thalassiosira antarctica Comber		X		X
T. decipiens (Grunow) E. Jorgensen	X	X	X	X
T. eccentrica (Ehrenberg) Cleve	X			
T. hyalina (Grunow) Gran		X		X
T. nordenskioeldii Cleve		X		X
T. oestrupii (Ostenfeld) Proschkina-Lavrenko				X
Triceratium arcticum Brightwell				X
T. montereyii Brightwell	X			
Pennales				
Achnanthes groenlandica (Cleve) Grunow	X			X
A. taeniata Grunow	X	X	X	X
Amphiprora alata (Ehrenberg) Kützing	X			
A. concilians Cleve	X			X
A. kjellmanii Cleve	X	X		X
A. kjellmanii var. *kariana* (Grunow) Cleve	X			
Amphora angusta Gregory				X
A. binodis Gregory	X			
A. inelegans Cleve et Grove	X	X		X
A. inelegans var. *polita* (Cleve) Peragallo et Peragallo	X			X
A. laevis var. *laevissima* (Gregory) Cleve	X			X

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
A. laevis var. minuta Cleve				X
A. macilenta Gregory		X		X
A. terroris Ehrenberg	X		X	X
Asterionella formosa Hassall				X
A. gracillima (Hantzsch) Heiberg		X		X
Caloneis semiinflata (Oestrup) Boyer	X			
C. subsalina (Donkin) Hendey		X		
Campylodiscus angularis Gregory	X			
Ceratoneis arcus (Ehrenbrg) Kützing				X
Cocconeis californica (Grunow) Grunow	X			X
C. dirupta Gregory				X
C. pseudomarginata Gregory	X		X	X
C. scutellum Ehrenberg	X	X	X	X
C. scutellum var. parva (Grunow) Cleve	X		X	X
C. scutellum var. stauroneiformis Rabenhorst		X		X
C. thumensis Mayer	X			X
Cylindrotheca closterium (Ehrenberg) Reimann et Lewin	X	X	X	X
Cymbella affinis Kützing	X	X		X
C. cistula (Hemprich) Kirchner				X
Diploneis bomboides (Schmidt) Cleve				X
D. bombus (Ehrenberg) Ehrenberg	X	X		X
D. borealis (Grunow) Cleve	X			

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
D. didyma (Ehrenberg) Ehrenberg	X			X
D. interrupta (Kützing) Cleve	X			
D. litoralis (Donkin) Cleve	X	X		X
D. smithii (Brébisson) Cleve	X	X		X
Eunotia arcus Ehrenberg	X			X
E. parallela Ehrenberg				X
E. rhyncocephala Hustedt	X			
Fragilaria bicapitata Mayer	X	X	X	X
F. intermedia (Grunow) Grunow				X
F. islandica Grunow		X		X
F. pinnata Ehrenberg	X	X	X	X
F. striatula Lyngbye		X	X	X
Fragilariopsis nana (Steemann-Nielsen) Paasche		X		X
Gomphonema augur Ehrenberg	X			X
G. exiguum Kützing				X
G. exiguum var. pachycladum (Brébisson) Cleve	X	X		X
G. gracile Ehrenberg	X	X		X
Grammatophora angulosa Ehrenberg	X			X
G. arctica Cleve	X	X	X	X
G. hamulifera Kützing	X			X
Gyrosigma balticum (Ehrenberg) Rabenhorst	X			X
G. distortum (Wm. Smith) Griffith et Henfrey				X

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
Licmophora dalmatica (Kützing) Grunow	X			
Navicula algida (Grunow)	X	X		X
N. ammophila Grunow	X	X		X
N. apiculata Brēbisson				X
N. cancellata Donkin	X	X	X	X
N. crassirostris Grunow	X	X		X
N. crucigeroides Hustedt	X	X		X
N. cryptocephala Kützing	X	X		X
N. debilissima Grunow	X		X	X
N. delicatissima Hustedt		X		
N. digitoradiata (Gregory) Ralfs	X			X
N. directa (Wm. Smith) Ralfs	X	X	X	X
N. directa var. subtilis (Gregory) Cleve	X	X		X
N. distans (Wm. Smith) Ralfs		X		
N. forcipata Grenville	X			X
N. forcipata var. densestriata Schmidt				X
N. gastrum (Ehrenberg) Kützing	X	X		X
N. gelida Grunow	X			
N. granii (E. Jorgensen) Gran		X	X	X
N. grevillei (Agardh) Heiberg	X			X
N. imperfecta Cleve	X			

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
N. kariana Grunow	X			
N. latissima Gregory	X			
N. lineola Grunow		X		X
N. lyra Ehrenberg				X
N. peregrina (Ehrenberg) Kützing	X	X		X
N. perlucens Östrup		X		
N. pygmaea Kützing	X			X
N. rhynchocephala Kützing	X			X
N. salinarum Grunow	X			X
N. sigma Ehrenberg	X			
N. solitaria Cleve	X			
N. transitans Cleve	X	X	X	X
N. transitans var. *derasa* (Grunow) Cleve	X	X	X	X
N. trigonocephala Cleve	X			X
N. trigonocephala var. *depressa* Östrup	X	X		
N. valida Cleve et Grunow	X			X
N. vanhoeffenii Gran	X	X		X
Nedium affinis (Ehrenberg) Pfitzer	X			
Nitzschia acicularis (Kützing) Wm. Smith	X	X	X	X
N. actinastroides (Lemmermann) Van Goor	X			X
N. acuminata (Wm. Smith) Grunow				X
N. angularis var. *kariana* Grunow		X		X

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
N. cylindrus (Grunow) Hasle	X	X	X	X
N. delicatissima Cleve	X	X		X
N. distans Gregory				X
N. frigida Grunow	X	X		X
N. frustulum (Kützing) Grunow	X			X
N. frustulum var. perpusilla (Rabenhorst) Grunow				X
N. gelida Cleve et Grunow	X		X	X
N. grunowii Hasle	X	X	X	X
N. linearis (Agardh) Wm. Smith	X	X	X	X
N. lineata Hasle		X		X
N. longissima (Brébisson) Grunow				X
N. marginulata Grunow	X			
N. seriata Cleve	X	X		X
N. sigma (Kützing) Wm. Smith				X
N. tergestina (Kützing) Ralfs	X		X	X
Opephora martyi Héribaud	X			
Pinnularia interrupta Wm. Smith	X			
P. quadratarea (Schmidt) Cleve	X	X		X
P. quadratarea var. bicontracta (Östrup) Heiden	X	X		X
P. quadratarea var. bicuneata Heiden et Kolbe	X			X
P. quadratarea var. capitata Heiden	X			
P. quadratarea var. gibbosa (Östrup) Heiden	X			

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
P. quadratarea var. densestriata Cleve	X			
P. quadratarea var. stuxbergii (Cleve) Cleve	X			X
Plagiogramma staurophorum (Gregory) Heiberg	X			X
Pleurosigma angulatum (Quekett) Wm. Smith	X			
P. elongatum Wm. Smith	X			X
P. elongatum var. kariana (Grunow) Cleve		X		X
P. latiusculum H. Peragallo	X			
P. longum Cleve	X			X
P. marinum Donkin	X		X	X
Pseudonitzschia delicatissima (Cleve) Heiden	X			
Rhabdonema arcuatum (Lyngbye) Kützing	X	X		X
R. minutum Kützing	X			X
Stauroneis quadripedis (Cleve-Euler) Hendey	X			
S. smithii var. sagitta (Cleve) Hustedt			X	
Stenoneis inconspicua var. baculus (Cleve) Cleve	X			X
Synedra parasitica (Wm. Smith) Hustedt		X		X
S. pulchella (Ralfs) Kützing	X			X
S. tabulata (Agardh) Kützing	X			X
Tabellaria fenestrata (Lyngbye) Kützing	X	X	X	X
T. flocculosa (Roth) Kützing	X			X
Thalassionema nitzschioides (Grunow) van Heurck	X			
Trachyneis aspera (Ehrenberg) Cleve	X			X

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
Chlorophyta (green algae)				
Ankistrodesmus falcatus (Corda) Ralfs	X	X		X
Carteria vectensis Conrad et Kufferath	X			
Chlamydomonas ballenyana Kol et Flint	X	X		X
C. pulsatilla Wohlenweber	X		X	X
C. tetraolaris Wohlenweber		X		X
Dunaliella parva Lerche		X		X
Micrasterias Agardh				X
Staurastrum megacanthum Lundell	X			
Thalassomonas Butcher				X
Trochiscia multispinosa (Moebius) Lemmermann				X
Chrysophyta (golden-yellow algae)				
Calyptrosphaera oblonga Lohmann	X			
Dictyocha Ehrenberg	X			
Dinobryon balticum (Schütt) Lemmermann				X
D. cylindricum Imhof				X
Distephanus Haeckel				X
Mallomonas Perty	X		X	X
Phaeocystis globosa Scherffel		X		
P. pouchetii (Hariot) Lagerheim	X			
Salpingoeca natans Grontved				

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
Cryptophyta (cryptomonads)				
Chroomonas placoidea Butcher				X
Cyanophyta (blue-green algae)				
Lyngbya Agardh	X			
Spirulina Turpin	X			
Euglenophyta (euglenoids)				
Euglena proxima Dangeard	X			X
E. schmitzii Gojdics	X	X		X
E. viridis Ehrenberg		X		X
Pyrrophyta (dinoflagellates)				
Dinophysis acuminata Claparède et Lachmann				X
D. arctica Mereschkowsky				X
Glenodinium Ehrenberg				X
Goniaulax catenata Kofoid	X			
G. monilata Howell				X
G. scrippsae Kofoid		X		X
Gymnodinium Stein	X			
Gyrodinium spirale (Bergh) Kofoid et Swezy				X
Oxytoxum Stein				X

Table 1. (cont'd.)

	Ice Season	Open water Season		
	Bottom	Intertidal	20m	Bottom
Peridinium Ehrenberg		X		X
Prorocentrum ovalis Rampi				X
P. rampii Sournia	X			X

Table 2. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 27 July - 2 August 1982.

Sample No.	82-17	82-18	82-19	82-22	82-23	82-24	82-25
Date	27-28 July	27-28 July	27-28 July	28 July-1 Aug	28 July-1 Aug	1-2 Aug	1-2 Aug
Station depth (m)	27-34	29-36	25-31	31-36	32-37	32-38	28-33
Ice cover (cm)	0	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	20,315,031	20,197,005	26,936,100	85,469,355	61,423,297	190,317,921	213,271,436
Bacillariophyta	20,009,016	20,095,455	26,693,069	82,324,657	59,854,044	181,193,088	210,584,551
Centrales	6,744,382	5,503,972	7,311,166	26,533,378	11,867,482	52,793,669	50,043,217
Biddulphia aurita	-	-	-	589,631	-	-	-
Chaetoceros affinis	448,267	284,338	1,964,496	2,751,610	1,176,940	8,473,058	671,721
C. decipiens	2,424,717	426,507	283,535	1,572,348	1,078,862	4,562,416	6,717,210
C. furcellatus	40,752	81,239	-	786,174	1,275,019	2,281,208	3,358,605
C. holsaticus	489,019	507,747	546,818	2,555,066	1,078,862	3,258,868	3,358,605
C. lauderi	-	-	141,768	-	588,470	-	1,343,442
C. septentrionalis	81,503	-	-	196,544	98,078	325,887	-
Cyclotella striata	-	81,239	-	-	98,078	325,887	335,861
Ditylum brightwellii	-	-	20,253	-	196,157	-	-
Melosira arctica	-	182,789	182,273	1,572,348	-	-	-
M. islandica	-	223,408	-	-	-	-	-
Thalassiosira antarctica	1,813,444	2,112,226	2,268,284	9,[illegible]7,546	3,236,586	14,339,021	13,098,560
T. decipiens	-	304,648	-	786,174	2,157,724	5,540,076	15,113,723
T. hyalina	1,426,304	1,299,831	1,883,486	6,485,937	686,549	13,687,248	5,709,629
T. nordenskioeldii	20,376	-	20,253	-	196,157	-	335,861
Pennales	13,264,634	14,591,483	19,381,903	55,791,279	47,986,562	128,399,419	160,541,334
Achnanthes taeniata	1,365,177	2,396,564	2,187,496	3,537,784	1,176,940	26,070,948	16,457,166

Table 2. (cont'd.)

Sample No.	82-17	82-18	82-19	82-22	82-23	82-24	82-25
Amphora inelegans	-	-	81,010	-	196,157	1,629,434	-
A. laevis var. laevissima	-	-	-	393,087	98,078	651,774	-
A. laevis var. minuta	-	-	-	393,087	-	-	-
A. macilenta	-	81,239	60,758	-	-	-	-
Asterionella formosa	20,376	-	-	-	-	-	-
Cocconeis pseudomarginata	-	-	20,253	589,631	-	-	335,861
C. scutellum	81,503	20,310	141,768	786,174	196,157	1,303,547	671,721
C. scutellum var. parva	-	40,620	40,505	-	-	-	-
C. scutellum var. stauroneiformis	81,503	20,310	-	-	-	651,774	335,861
Cylindrotheca closterium	1,344,801	1,563,859	1,296,162	3,537,784	2,746,194	4,236,529	4,366,187
Cymbella affinis	-	-	-	-	98,078	-	-
Diploneis didyma	20,376	20,310	-	-	-	-	-
D. litoralis	40,752	81,239	20,253	589,631	294,235	325,887	-
D. smithii	-	-	-	-	98,078	-	-
Fragilaria bicapitata	-	121,859	162,020	-	98,078	-	-
F. islandica	326,012	406,197	2,329,042	3,537,784	2,255,802	10,102,492	4,702,047
F. pinnata	61,127	284,338	607,576	1,572,348	588,470	977,661	2,015,163
F. striatula	774,279	81,239	243,030	2,555,066	-	-	7,053,071
Fragilariopsis nana	448,267	60,930	222,778	6,289,393	882,705	1,955,321	31,570,889
Gomphonema augur	-	20,310	20,253	-	-	-	1,007,582
G. exiguum var. pachycladum	203,760	20,310	40,505	-	-	-	335,861
G. gracile	-	-	-	589,631	196,157	-	335,861
Grammatophora arctica	-	20,310	60,758	196,544	98,078	-	-
Navicula algida	-	-	20,253	-	-	-	-

Table 2. (cont'd.)

Sample No.	82-17	82-18	82-19	82-22	82-23	82-24	82-25
N. ammophila	61,127	142,169	81,010	786,174	196,157	325,887	-
N. directa	40,752	60,930	60,758	-	294,235	651,774	-
N. directa var. subtilis	-	40,620	40,505	-	294,235	-	335,861
N. gastrum	-	60,930	60,758	196,544	196,157	-	671,721
N. granii	1,181,795	2,010,676	2,531,567	1,768,892	2,844,272	13,035,474	-
N. grevillei	-	-	-	-	-	651,774	-
N. lineola	346,388	2,051,296	2,329,042	5,699,763	2,844,272	14,013,134	16,457,166
N. peregrina	-	20,310	-	1,152,170	196,157	5,540,076	5,373,768
N. pygmaea	-	-	-	-	-	325,887	335,861
N. transitans	40,752	81,239	-	-	-	651,774	-
N. transitans var. derasa	101,879	-	263,283	589,631	196,157	-	-
N. valida	-	20,310	-	196,544	-	-	-
N. vanhoeffenii	122,255	-	-	-	98,078	2,281,208	671,721
Nitzschia acicularis	224,134	528,056	627,829	1,572,348	980,784	-	2,686,884
N. angularis var. kariana	81,503	20,310	-	-	-	-	-
N. cylindrus	1,793,068	954,564	789,849	4,323,958	1,471,175	3,910,642	13,098,560
N. delicatissima	-	264,028	202,525	196,544	-	-	2,351,024
N. distans	-	-	-	196,544	-	-	-
N. frigida	224,134	182,789	182,273	589,631	392,313	6,843,624	6,717,210
N. frustulum var. perpusilla	-	20,310	-	-	98,078	-	-
N. grunowii	163,006	2,680,901	2,086,011	2,555,066	6,080,858	27,048,608	17,128,887
N. linearis	40,752	20,310	20,253	-	-	325,887	335,861
N. lineata	3,851,022	20,310	2,450,557	10,220,264	22,486,192	-	24,181,958
N. seriata	-	20,310	20,253	786,174	196,157	2,607,095	671,721

Table 2. (cont'd.)

Sample No.	82-17	82-18	82-19	82-22	82-23	82-24	82-25
Pinnularia sp.	-	40,620	-	-	98,078	325,887	335,861
P. quadratarea	-	20,310	40,505	196,544	-	325,887	-
P. quadratarea var. bicuneata	-	20,310	-	-	-	-	-
Pleurosigma elongatum var. kariana	-	-	-	-	-	325,887	-
P. marinum	20,376	20,310	-	-	-	-	-
Rhabdonema arcuatum	163,006	40,620	40,505	-	-	1,303,547	-
Synedra parasitica	40,752	-	-	-	-	-	-
S. pulchella	-	-	-	196,544	-	-	-
Chlorophyta	81,504	81,240	141,768	1,965,436	1,373,097	8,473,059	2,686,885
Chlamydomonas ballenyana	20,376	-	-	786,174	392,313	-	-
C. cysts	-	-	-	-	-	651,774	335,861
C. tetraolaris	40,752	60,930	141,768	982,718	980,784	6,843,624	2,015,163
Dunaliella parva	20,376	20,310	-	196,544	-	977,661	335,861
Chrysophyta	20,376	20,310	40,505	982,718	-	325,887	-
Phaeocystis pouchetii	-	-	-	786,174	-	325,887	-
Unidentified	20,376	20,310	40,505	196,544	-	-	-
Euglenophyta	40,752	-	20,253	196,544	-	-	-
E. schmitzii	40,752	-	-	196,544	-	-	-
E. viridis	-	-	20,253	-	-	-	-

Table 2. (cont'd.)

Sample No.	82-17	82-18	82-19	82-22	82-23	82-24	82-25
Pyrrophyta	102,256	-	40,505	-	196,156	325,887	-
Dinophysis acuminata	20,376	-	-	-	-	-	-
Gonlaulax scrippsae	-	-	40,505	-	-	-	-
Gyrodinium spirale	-	-	-	-	98,078	-	-
Oxytoxum sp.	20,376	-	-	-	-	-	-
Peridinium sp.	40,752	-	-	-	-	325,887	-
Prorocentrum ovalis	20,752	-	-	-	98,078	-	-
Unidentified cysts	61,127	-	-	-	196,157	-	-

Table 3. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 2 - 7 August 1982.

Sample No.	82-29	82-30	82-31	82-35	82-36	82-37
Date	2-3 Aug	2-3 Aug	2-3 Aug	3-7 Aug	3-7 Aug	3-7 Aug
Station depth (m)	25-32	26-32	27-33	24-32	23-32	25-33
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	423,964,669	407,088,471	378,207,513	489,542,721	418,466,289	195,950,434
Bacillariophyta	406,719,438	392,395,256	373,026,589	481,833,386	401,229,692	187,389,493
Centrales	212,116,336	185,825,948	193,421,196	270,790,362	254,718,610	73,814,340
Chaetoceros affinis	66,394,137	54,451,324	81,167,824	77,093,341	83,310,222	16,551,154
C. decipiens	47,424,384	38,029,496	35,402,987	79,020,674	87,140,577	10,463,373
C. furcellatus	9,484,877	8,643,067	6,907,900	5,782,001	2,872,766	2,473,161
C. holsaticus	6,035,831	5,185,840	5,180,925	8,673,001	6,703,121	5,707,294
C. lauderi	6,035,831	6,050,147	1,726,975	1,927,334	957,589	1,331,702
C. septentrionalis	5,173,569	864,307	863,487	1,927,334	3,830,355	190,243
C. spores	-	864,307	-	1,927,334	5,745,533	1,331,702
C. teres	-	-	-	-	-	190,243
C. wighami	9,484,877	-	-	-	-	-
Coscinodiscus sp.	-	864,307	-	-	957,589	1,902,431
Cyclotella striata	-	-	-	-	957,589	190,243
Melosira arctica	-	-	-	4,818,334	-	-
Thalassiosira sp.	-	3,457,227	-	-	-	-
T. antarctica	21,556,538	27,657,816	19,860,212	41,437,671	28,727,663	14,077,993
T. decipiens	22,418,800	22,471,975	25,041,137	24,091,669	14,363,831	10,843,859
T. hyalina	10,347,138	17,286,135	16,406,262	24,091,669	18,194,186	7,229,240
T. nordenskioeldii	7,760,354	-	863,487	-	957,589	1,331,702

Table 3. (cont'd.)

Sample No.	82-29	82-30	82-31	82-35	82-36	82-37
Pennales	194,603,102	206,569,308	179,605,393	211,043,024	146,511,082	113,575,153
Achnanthes taeniata	27,592,369	22,471,975	25,041,137	3,854,667	27,770,074	10,653,616
Amphiprora kjellmanii	-	-	-	963,667	-	-
Amphora inelegans	-	-	3,453,950	1,927,334	1,915,178	1,141,459
Asterionella gracillima	862,262	-	-	-	-	-
Cocconeis scutellum	2,586,785	2,592,920	863,487	963,667	1,915,178	2,092,675
C. scutellum var. parva	862,262	-	-	-	-	-
Cylindrotheca closterium	17,245,230	18,150,441	10,361,850	11,564,001	11,491,065	7,990,212
Cymbella affinis	862,262	-	-	-	-	-
Diploneis litoralis	-	1,728,613	-	3,854,667	-	-
Fragilaria bicapitata	862,262	-	-	963,667	-	190,243
F. intermedia	862,262	-	-	963,667	-	380,486
F. islandica	12,071,661	5,185,840	-	24,091,669	-	8,370,698
F. pinnata	-	864,307	-	1,927,334	-	4,565,835
F. striatula	6,898,092	-	5,180,925	-	-	1,521,945
Fragilariopsis nana	8,622,615	-	-	39,510,337	-	1,902,431
Gomphonema sp.	-	-	-	-	-	570,729
G. gracile	-	-	-	963,667	957,589	380,486
Navicula ammophila	2,586,785	-	-	-	957,589	-
N. crucigeroides	862,262	-	-	-	-	-
N. debilissima	-	-	-	-	2,872,766	1,141,459
N. directa	862,262	-	863,487	963,667	-	570,729
N. gastrum	862,262	-	-	-	-	-
N. granii	-	19,879,055	45,764,837	18,309,668	2,872,766	1,902,431

Table 3. (cont'd.)

Sample No.	82-29	82-30	82-31	82-35	82-36	82-37
N. grevillei	862,262	864,307	-	-	-	-
N. lineola	8,622,615	22,471,975	14,679,287	12,527,668	12,448,654	8,941,428
N. peregrina	10,347,138	5,185,840	6,044,412	7,709,334	4,787,944	4,185,349
N. transitans	-	-	863,487	-	-	-
N. transitans var. derasa	-	-	2,590,462	1,927,334	957,589	-
N. valida	-	-	-	-	-	570,729
N. vanhoeffenii	-	2,592,920	-	-	-	-
Nitzschia acicularis	5,173,569	9,507,374	18,133,237	10,600,334	6,703,121	7,990,212
N. angularis var. kariana	-	-	-	963,667	-	-
N. cylindrus	28,454,630	21,607,668	9,498,362	26,982,669	17,236,598	4,946,322
N. delicatissima	8,622,615	-	863,487	1,927,334	-	-
N. frigida	4,311,308	5,185,840	-	8,673,001	7,660,710	9,321,914
N. frustulum	862,262	-	-	-	-	-
N. frustulum var. perpusilla	-	-	-	-	957,589	-
N. grunowii	12,933,923	33,707,963	-	20,237,002	27,770,074	15,029,208
N. linearis	-	-	-	5,782,001	-	190,243
N. lineata	24,737,576	32,843,656	30,222,062	-	14,363,831	17,121,883
N. seriata	862,262	864,307	1,726,975	-	957,589	1,141,459
N. sigma	-	864,307	-	-	-	-
Pinnularia sp.	1,724,523	-	-	963,667	1,915,178	-
P. quadratarea	-	-	863,487	-	-	380,486
P. quadratarea var. bicontracta	-	-	863,487	-	-	-
P. quadratarea var. bicuneata	-	-	-	-	-	380,486
Plagiogramma staurophorum	862,262	-	-	-	-	-

Table 3. (cont'd.)

Sample No.	82-29	82-30	82-31	82-35	82-36	82-37
Pleurosigma elongatum	-	-	-	963,667	-	-
P. marinum	862,262	-	-	-	-	-
Rhabdonema arcuatum	862,262	-	-	963,667	-	-
Tabellaria flocculosa	-	-	1,726,975	-	-	-
Chlorophyta	12,933,923	12,100,295	4,317,437	6,745,668	17,236,597	7,229,240
Chlamydomonas ballenyana	1,724,523	4,321,534	-	1,927,334	-	2,663,404
C. tetraolaris	11,209,400	6,050,147	4,317,437	4,818,334	14,363,831	3,424,377
Dunaliella parva	-	864,307	-	-	2,872,766	190,243
Trochiscia multispinosa	-	864,307	-	-	-	951,216
Chrysophyta	1,724,523	864,307	-	-	-	-
Phaeocystis pouchetii	1,724,523	864,307	-	-	-	-
Cryptophyta	-	-	-	-	-	380,486
Chroomonas placoidea	-	-	-	-	-	380,486
Euglenophyta	-	1,728,613	863,487	-	-	-
Euglena schmitzii	-	1,728,613	863,487	-	-	-
Pyrrophyta	2,586,785	-	-	963,667	-	951,215
Goniaulax monilata	-	-	-	-	-	570,729
G. scrippsae	862,262	-	-	-	-	-
Prorocentrum sp.	-	-	-	963,667	-	190,243
P. ovalis	1,724,523	-	-	-	-	190,243

Table 4. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 1 - 6 September 1982.

Sample No.	82-45	82-46	82-47	82-48	82-50	82-52
Date	1-2 Sept	1-2 Sept	2-4 Sept	2-4 Sept	4-6 Sept	4-6 Sept
Station depth (m)	24-32	24-32	27-35	26-35	22-32	25-35
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	921,907	1,616,922	3,528,897	8,277,315	7,214,171	14,073,486
Bacillariophyta	800,145	1,527,800	3,402,489	6,950,822	6,775,472	13,099,543
Centrales	360,934	802,093	2,106,806	4,510,073	5,410,632	10,713,383
Chaetoceros affinis	-	59,414	94,806	689,776	536,189	827,852
C. decipiens	17,394	21,219	136,942	212,239	146,233	194,789
C. furcellatus	126,109	458,339	653,110	1,963,208	1,803,545	2,970,529
C. holsaticus	8,697	-	31,602	53,060	-	-
C. lauderi	-	-	-	-	48,744	-
C. septentrionalis	-	33,951	126,408	265,298	536,189	925,247
C. spores	13,046	-	-	-	48,744	48,697
Cyclotella striata	-	-	10,534	-	-	-
Melosira arctica	4,349	-	-	-	-	-
Thalassiosira antarctica	100,018	33,951	-	53,060	146,233	-
T. decipiens	86,972	186,731	1,000,734	1,008,134	2,047,267	5,307,994
T. hyalina	-	4,244	-	-	48,744	292,183
T. nordenskioeldii	4,349	4,244	52,670	265,298	48,744	146,092
Pennales	439,211	725,707	1,295,683	2,440,749	1,364,840	2,386,160
Achnanthes taeniata	26,092	29,707	52,670	-	97,489	48,697
Amphiprora kjellmanii	4,349	-	-	-	-	-
Amphora inelegans	-	8,488	-	53,060	-	-
Cocconeis dirupta	4,349	-	-	-	-	-

Table 4. (cont'd.)

Sample No.	82-45	82-46	82-47	82-48	82-50	82-52
C. pseudomarginata	-	16,976	-	-	-	146,092
C. scutellum	17,394	12,732	105,340	53,060	48,744	48,697
C. scutellum var. parva	13,046	4,244	-	53,060	-	48,697
C. scutellum var. stauroneiformis	13,046	-	-	-	-	-
Cylindrotheca closterium	4,349	12,732	105,340	795,895	-	97,394
Cymbella affinis	-	-	-	-	48,744	243,486
C. cistula	-	-	-	-	-	48,697
Diploneis litoralis	8,697	-	-	-	-	-
Eunotia parallela	4,349	-	-	-	-	-
Fragilaria bicapitata	-	-	105,340	106,119	48,744	-
F. intermedia	-	16,976	105,340	-	-	48,697
F. pinnata	39,137	12,732	-	-	-	48,697
F. striatula	-	-	52,670	-	-	194,789
Gomphonema sp.	-	-	-	-	48,744	97,394
G. augur	-	-	-	53,060	-	-
G. gracile	17,394	4,244	10,534	-	-	-
Grammatophora arctica	-	-	-	-	97,489	-
Licmophora sp.	-	-	-	-	48,744	-
Navicula algida	-	-	10,534	-	-	-
N. ammophila	4,349	25,463	52,670	53,060	-	-
N. cancellata	13,046	-	-	-	-	48,697
N. crassirostris	-	-	10,534	-	-	-
N. cryptocephala	-	8,488	-	159,179	48,744	-
N. debilissima	-	-	73,738	-	146,233	97,394

Table 4. (cont'd.)

Sample No.	82-45	82-46	82-47	82-48	82-50	82-52
N. directa	-	4,244	-	-	48,744	-
N. directa var. subtilis	-	4,244	-	-	-	-
N. forcipata var. densestriata	-	-	-	-	-	48,697
N. granii	4,349	33,951	-	53,060	-	779,155
N. grevillei	4,349	-	-	-	-	-
N. lineola	30,440	84,878	42,136	53,060	-	-
N. peregrina	43,486	33,951	52,670	-	48,744	243,486
N. pygmaea	8,697	-	-	-	-	-
N. transitans var. derasa	13,046	4,244	21,068	53,060	-	-
N. trigonocephala	-	-	10,534	-	-	-
Nitzschia acicularis	21,743	72,146	31,602	53,060	146,233	48,697
N. angularis var. kariana	-	-	-	53,060	-	-
N. cylindrus	13,046	8,488	94,806	-	194,978	-
N. distans	-	-	-	53,060	-	-
N. frigida	13,046	59,414	10,534	-	-	-
N. grunowii	82,623	127,316	42,136	689,776	194,978	-
N. lineata	8,697	110,341	305,487	-	-	48,697
N. seriata	4,349	12,732	-	-	48,744	-
Pinnularia sp.	-	8,488	-	-	48,744	-
Pleurosigma elongatum	8,697	8,488	-	53,060	-	-
Rhabdonema arcuatum	4,349	-	-	53,060	-	-
Tabellaria fenestrata	8,697	-	-	-	-	-

Table 4. (cont'd.)

Sample No.	82-45	82-46	82-47	82-48	82-50	82-52
Chlorophyta	73,926	76,390	73,738	1,114,254	341,211	876,549
Chlamydomonas ballenyana	21,743	16,976	-	53,060	-	-
C. cysts	-	25,463	10,534	53,060	-	-
C. tetraolaris	21,743	25,463	63,204	955,074	341,211	730,458
Dunaliella parva	30,440	8,488	-	-	-	97,394
Unidentified	-	-	-	53,060	-	48,697
Chrysophyta	8,698	-	-	106,119	-	-
Phaeocystis pouchetii	4,349	-	-	106,119	-	-
Unidentified	4,349	-	-	-	-	-
Euglenophyta	8,697	4,244	10,534	53,060	-	
Euglena proxima	-	-	-	53,060	-	-
E. schmitzii	8,697	4,244	10,534	-	-	-
Pyrrophyta	8,698	8,488	10,534	53,060	97,488	48,697
Dinophysis arctica	4,349		-	-	48,744	-
Glenodinium sp.	-	4,244	-	-	-	-
Goniaulax sp.	-	-	10,534	53,060	-	-
Prorocentrum sp.	4,349	-	-	-	-	-
P. ovalis	-	4,244	-	-	48,744	48,697
Unidentified spores	21,743	-	31,602	-	-	48,697

Table 5. Sedimentation rates and species composition of phytoplankton contributed to the sediments in the intertidal zone of Frobisher Bay, July - August 1982.

Sample No.	82-20	82-21	82-27
Date	28 July	28 July	3 August
Station depth (m)	-	-	-
Ice cover (cm)	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	103,258,264	99,578,679	310,268,535
Bacillariophyta	97,968,865	95,209,176	282,352,704
Centrales	24,147,255	6,439,268	161,912,829
Chaetoceros affinis	2,759,686	2,299,738	48,653,308
C. decipiens	4,139,529	229,974	36,689,380
C. fragilis	229,974	-	-
C. furcellatus	7,589,137	459,948	23,130,261
C. holsaticus	1,609,817	1,149,869	7,178,357
C. lauderi	689,922	-	3,987,976
C. septentrionalis	459,948	459,948	797,595
C. spores	-	-	797,595
Cyclotella striata	229,974	-	-
Melosira islandica	459,948	1,839,791	-
Thalassiosira antarctica	4,829,451	-	9,571,143
T. decipiens	919,895	-	25,523,047
T. hyalina	-	-	3,190,381
T. nordenskioeldii	-	-	2,393,786
T. oestrupii	229,974	-	-
Pennales	73,821,610	88,769,908	120,439,875
Achnanthes taeniata	919,895	1,609,817	21,535,071
Amphiprora kjellmanii	229,974	1,149,869	-
Amphora inelegans	689,922	3,219,634	-

Table 5. (cont'd.)

Sample No.	82-20	82-21	82-27
A. macilenta	459,948	-	-
Asterionella gracillima	459,948	-	2,393,786
Caloneis subsalina	229,974	-	-
Cocconeis scutellum	2,069,765	919,895	-
C. scutellum var. stauroneiformis	229,974	-	797,595
Cylindrotheca closterium	6,899,215	6,209,294	5,583,166
Cymbella affinis	-	229,974	-
Diploneis bombus	-	689,922	-
D. litoralis	1,379,843	229,974	797,595
D. smithii	229,974	229,974	-
Fragilaria bicapitata	-	-	797,595
F. islandica	3,909,555	919,895	14,356,714
F. pinnata	1,379,843	689,922	1,595,190
F. striatula	-	-	3,190,381
Fragilariopsis nana	5,979,320	4,599,477	-
Gomphonema exiguum var. pachycladum	229,974	459,948	-
G. gracile	1,609,817	1,149,869	-
Grammatophora arctica	-	459,948	797,595
Licmophora sp.	229,974	-	-
Navicula algida	-	459,948	-
N. ammophila	11,268,718	13,338,483	-
N. cancellata	229,974	919,895	797,595
N. crassirostris	-	229,974	-

Table 5. (cont'd.)

Sample No.	82-20	82-21	82-27
N. crucigeroides	229,974	-	-
N. cryptocephala	229,974	459,948	797,595
N. delicatissima	-	4,139,529	-
N. directa	229,974	-	-
N. directa var. subtilis	229,974	-	-
N. distans	-	229,974	-
N. gastrum	459,948	1,149,869	-
N. granii	459,948	-	1,595,190
N. lineola	1,379,843	3,219,634	2,393,786
N. peregrina	689,922	1,609,817	4,785,571
N. perlucens	2,529,712	5,289,398	-
N. transitans	229,974	-	2,393,786
N. transitans var. derasa	2,069,765	229,974	797,595
N. trigonocephala var. depressa	459,948	229,974	-
N. vanhoeffenii	229,974	229,974	7,975,952
Nitzschia acicularis	229,974	689,922	-
N. angularis var. kariana	459,948	-	-
N. cylindrus	919,895	1,149,869	10,368,738
N. delicatissima	459,948	3,679,582	8,773,547
N. frigida	2,069,765	2,759,686	-
N. grunowii	8,049,085	15,638,222	17,547,095
N. linearis	229,974	229,974	1,595,190
N. lineata	8,509,032	5,519,372	6,380,762
N. seriata	229,974	229,974	797,595

Table 5. (cont'd.)

Sample No.	82-20	82-21	82-27
Pinnularia sp.	-	2,069,765	-
P. quadratarea	1,149,869	689,922	-
P. quadratarea var. bicontracta	689,922	-	-
Pleurosigma elongatum var. kariana	459,948	229,974	-
Rhabdonema arcuatum	229,974	229,974	-
Synedra parasitica	2,069,765	1,149,869	-
Tabellaria fenestrata	-	-	1,595,190
Chlorophyta	2,989,660	3,679,581	23,927,856
Ankistrodesmus falcatus	-	919,895	-
C. ballenyana	1,609,817	1,149,869	797,595
C. cysts	459,948	229,974	-
C. tetraolaris	-	919,895	10,368,738
Dunaliella parva	-	-	12,761,523
Unidentified	919,895	459,948	-
Chrysophyta	1,379,843	-	2,392,785
Phaeocystis pouchetii	1,149,869	-	1,595,190
Unidentified	229,974	-	797,595
Euglenophyta	-	229,974	1,595,190
Euglena schmitzii	-	-	1,595,190
E. viridis	-	229,974	-

Table 5. (cont'd.)

Sample No.	82-20	82-21	82-27
Pyrrophyta			
Goniaulax scrippsae	919,896	459,948	-
Peridinium sp.	459,948	229,974	-
Prorocentrum sp.	229,974	-	-
	229,974	229,974	-

Table 6. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 14 - 22 March 1983.

Sample No.	83-2	83-3	83-5	83-6
Date	14-18 Mar	14-18 Mar	18-22 Mar	18-22 Mar
Station depth (m)	33-42	32-42	34-42	33-42
Ice cover (cm)	142	142	144	144
Sedimentation rate (cells.m^{-2}.day^{-1})	272,062	1,565,792	197,221	242,909
Bacillariophyta	196,199	1,453,773	178,237	223,980
Centrales	94,175	143,280	73,825	69,401
Biddulphia aurita	2,616	-	-	-
Chaetoceros brevis	-	-	1,055	-
C. furcellatus	65,399	83,363	45,349	42,061
C. holsaticus	-	2,605	2,109	1,052
C. septentrionalis	-	2,605	-	-
C. spores	-	-	-	1,052
Coscinodiscus sp.	-	-	1,055	-
C. lacustris var. *septentrionalis*	-	-	1,055	4,206
Cyclotella striata	2,616	2,605	-	-
Melosira islandica	-	5,210	-	-
Thalassiosira sp.	13,080	31,261	8,437	14,721
T. decipiens	10,464	15,631	13,710	6,309
T. eccentrica	-	-	1,055	-
Pennales	102,024	1,310,493	104,412	154,579
Amphora inelegans var. *polita*	-	2,605	2,109	10,515
A. laevis var. *laevissima*	-	-	1,055	1,052
A. terroris	2,616	-	7,382	8,412
Cocconeis sp.	-	7,815	-	-

Table 6. (cont'd.)

Sample No.	83-2	83-3	83-5	83-6
C. californica	-	5,210	-	2,103
C. pseudomarginata	-	2,605	2,109	4,206
C. scutellum	18,312	15,631	13,710	19,979
C. scutellum var. parva	-	-	-	1,052
C. thumensis	-	2,605	1,055	2,103
Cylindrotheca closterium	-	5,210	-	-
Cymbella sp.	2,616	-	-	-
Diploneis sp.	-	5,210	-	-
D. interrupta	2,616	-	-	1,052
D. litoralis	2,616	-	1,055	2,103
D. smithii	-	-	1,055	3,155
Eunotia sp.	5,232	2,605	-	-
E. arcus	-	-	1,055	-
Fragilaria bicapitata	-	2,605	-	-
F. pinnata	18,312	44,287	16,874	22,082
Gomphonema sp.	-	-	1,055	4,206
G. exiguum var. pachycladum	-	-	1,055	-
G. gracile	-	-	1,055	-
Grammatophora angulosa	2,616	10,420	-	3,155
G. arctica	-	13,025	2,109	5,258
G. hamulifera	5,232	10,420	-	-
Licmophora sp.	-	2,605	-	-
L. dalmatica	-	-	3,164	-
Navicula sp.	7,848	20,841	7,382	11,567

Table 6. (cont'd.)

Sample No.	83-2	83-3	83-5	83-6
N. ammophila	5,232	-	-	-
N. cancellata	-	5,210	3,164	2,103
N. crassirostris	-	-	-	1,052
N. digitoradiata	2,616	5,210	-	-
N. directa	-	2,605	1,055	1,052
N. directa var. subtilis	2,616	-	-	-
N. gastrum	-	5,210	-	-
N. gelida	-	-	-	2,103
N. imperfecta	-	-	1,055	-
N. peregrina	-	-	2,109	-
N. pygmaea	-	-	1,055	-
N. salinarum	-	2,605	-	-
N. sigma	-	-	-	1,052
N. transitans	-	-	-	4,206
N. transitans var. derasa	-	5,210	3,164	-
Nitzschia sp.	5,232	-	-	-
N. acicularis	-	-	-	2,103
N. actinastroides	10,464	-	-	7,361
N. cylindrus	2,616	2,605	5,273	4,206
N. frigida	-	255,300	-	-
N. frustulum	-	-	3,164	12,618
N. grunowii	-	54,707	1,055	-
N. linearis	-	638,429	5,273	5,258
N. seriata	-	169,463	-	-

Table 6. (cont'd.)

Sample No.	83-2	83-3	83-5	83-6
Opephora martyi	-	2,605	-	-
Pinnularia interrupta	-	-	-	1,052
P. quadratarea	-	-	2,109	-
P. quadratarea var. *bicontracta*	-	-	1,055	-
P. quadratarea var. *bicuneata*	-	-	1,055	-
Plagiogramma staurophorum	-	5,210	3,164	-
Pleurosigma elongatum	-	-	-	1,052
Rhabdonema arcuatum	-	2,605	1,055	1,052
Stenoneis inconspicua var. *baculus*	-	-	-	4,206
Synedra sp.	5,232	-	-	-
S. pulchella	-	-	3,164	2,103
Thalassionema nitzschioides	-	-	1,055	-
Trachyneis aspersa	-	-	2,109	-
Chlorophyta				
Chlamydomonas sp.	65,399	98,994	14,765	15,774
C. ballenyana	49,703	72,943	12,655	5,258
C. pulsatilla	7,848	2,605	1,055	-
Staurastrum megacanthum	7,848	23,446	-	7,361
Unidentified	-	-	1,055	-
	-	-	-	3,155
Chrysophyta				
Phaeocystis pouchetii	-	10,420	2,109	3,155
Salpingoeca natans	-	5,210	2,109	2,103
Unidentified	-	5,210	-	-
	-	-	-	1,052

Table 6. (cont'd.)

Sample No.	83-2	83-3	83-5	83-6
Euglenophyta	2,616	-	-	-
E. schmitzii	2,616	-	-	-
Pyrrophyta	7,848	2,605	2,110	-
Dinophysis sp.	2,616	-	-	-
Goniaulax sp.	-	-	1,055	-
G. catenata	-	-	1,055	-
Gymnodinium cysts	2,616	-	-	-
Prorocentrum sp.	2,616	2,605	-	-

Table 7. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 1 - 5 August 1983.

Sample No.	83-7	83-8	83-9	83-10	83-11	83-12	83-13
Date	1-2 Aug	1-2 Aug	1-2 Aug	2-5 Aug	2-5 Aug	2-5 Aug	2-5 Aug
Station depth (m)	26-31	25-31	26-32	31-36	30-36	31-36	30-35
Ice cover (cm)	0	0	0	0	0	0	0
Sedimentation rate ($cells.m^{-2}.day^{-1}$)	2,240,073,282	1,859,396,203	2,022,296,194	1,022,143,446	814,775,752	635,375,587	679,351,436
Bacillariophyta	2,225,188,410	1,829,405,941	2,000,194,596	1,012,171,315	806,054,912	627,900,581	673,118,854
Centrales	2,035,506,289	1,671,957,066	1,775,495,018	887,519,679	651,571,441	514,529,645	585,862,708
Chaetoceros affinis	26,048,527	-	-	-	-	2,491,669	-
C. borealis	3,721,218	-	-	-	-	-	-
C. brevis	331,188,409	277,409,917	349,941,964	245,563,731	153,237,643	184,383,506	145,842,419
C. decipiens	614,000,983	453,602,701	313,105,968	251,796,313	169,433,492	104,650,098	159,554,099
C. furcellatus	346,073,281	168,695,220	320,473,167	191,963,526	64,783,394	13,704,179	14,958,197
C. holsaticus	14,884,872	86,222,001	99,457,190	29,916,394	18,687,517	41,112,538	41,135,041
C. septentrionalis	576,788,802	539,824,703	534,121,945	89,749,181	156,975,147	99,666,760	152,075,001
C. spores	3,721,218	-	-	2,493,033	13,704,179	2,491,669	3,739,549
C. wighami	78,145,580	56,231,740	84,722,791	39,888,525	42,358,373	36,129,200	41,135,041
Coscinodiscus sp.	-	-	3,683,600	-	-	2,491,669	-
C. lacustris var. *septentrionalis*	-	-	3,683,600	-	-	1,245,834	-
Ditylum brightwellii	-	-	-	-	-	1,245,834	-
Leptocylindrus danicus	-	-	7,367,199	-	-	-	-
Rhizosolenia sp.	-	-	-	-	-	-	1,246,516
Thalassiosira sp.	3,721,218	26,241,479	18,417,998	2,493,033	6,229,172	11,212,510	11,218,648
T. decipiens	33,490,963	63,729,305	40,519,596	33,655,943	26,162,524	13,704,179	14,958,197

Table 7. (cont'd.)

Sample No.	83-7	83-8	83-9	83-10	83-11	83-12	83-13
T. nordenskioeldii	3,721,218	-	-	-	-	-	-
Pennales	189,682,121	157,448,875	224,699,578	124,651,636	154,483,471	113,370,936	87,256,146
Achnanthes taeniata	37,212,181	3,748,783	25,785,197	18,697,746	14,950,014	23,670,855	16,204,713
Amphiprora sp.	-	-	-	1,246,516	-	-	-
Amphora inelegans var. *polita*	7,442,436	-	-	-	-	-	-
A. terroris	7,442,436	-	7,367,199	1,246,516	-	-	-
Cocconeis sp.	-	-	-	-	1,245,834	-	-
C. pseudomarginata	-	-	-	-	-	-	1,246,516
C. scutellum	-	-	-	1,246,516	-	1,245,834	-
Cylindrotheca closterium	11,163,654	14,995,131	-	9,972,131	6,229,172	11,212,510	4,986,066
Diploneis didyma	-	-	-	1,246,516	-	-	-
Eunotia arcus	-	-	-	1,246,516	-	-	-
Fragilaria islandica	-	-	-	-	46,095,876	-	-
F. pinnata	-	14,995,131	25,785,197	4,986,066	3,737,503	7,475,007	7,479,098
Fragilariopsis nana	-	-	-	-	-	-	2,493,033
Gomphonema sp.	-	-	-	-	-	-	2,493,033
G. augur	-	-	-	1,246,516	-	-	-
G. exiguum var. pachycladum	-	-	-	-	-	-	1,246,516
Grammatophora angulosa	-	-	-	-	1,245,834	-	-
G. hamulifera	-	-	-	1,246,516	-	-	-
Navicula sp.	14,884,872	18,743,913	7,367,199	4,986,066	6,229,172	-	-
N. apiculata	-	-	-	-	1,245,834	-	-
N. cancellata	-	-	-	1,246,516	-	1,245,834	-

Table 7. (cont'd.)

Sample No.	83-7	83-8	83-9	83-10	83-11	83-12	83-13
N. crassirostris	-	3,748,783	-	-	-	-	-
N. directa	3,721,218	-	-	-	-	-	-
N. directa var. subtilis	-	-	-	-	-	1,245,834	1,245,516
N. grevillei	3,721,218	7,497,565	-	-	-	-	-
N. peregrina	3,721,218	-	-	-	1,245,834	2,491,669	-
N. transitans	3,721,218	3,748,783	-	-	2,491,669	2,491,669	1,246,516
N. transitans var. derasa	-	3,748,783	3,683,600	1,246,516	-	2,491,669	1,246,516
N. vanhoeffenii	-	-	-	1,246,516	1,245,834	-	-
Nitzschia sp.	-	-	-	-	-	1,245,834	-
N. acicularis	18,606,090	11,246,348	7,367,199	19,944,262	8,720,841	12,458,345	-
N. actinastroides	33,490,963	3,748,783	3,683,600	4,986,066	-	2,491,669	2,493,033
N. acuminata	3,721,218	-	-	-	-	-	-
N. cylindrus	29,669,745	44,985,392	40,519,596	43,628,074	49,833,380	29,900,028	39,888,525
N. delicatissima	-	-	3,683,600	1,246,516	3,737,503	-	-
N. frustulum	-	3,748,783	-	-	-	-	-
N. grunowii	-	-	88,406,391	-	-	-	-
N. linearis	3,721,218	14,995,131	3,683,600	2,493,033	1,245,834	6,229,172	2,493,033
N. seriata	-	-	-	-	3,737,503	7,475,007	-
Pleurosigma elongatum	-	-	3,683,600	-	-	-	-
P. longum	-	-	-	1,246,516	-	-	-
Rhabdonema minutum	-	-	-	-	-	-	1,246,516
Stenoneis inconspicua var. baculus	7,442,436	3,748,783	-	-	-	-	1,246,516
Synedra tabulata	-	3,748,783	-	-	-	-	-

Table 7. (cont'd.)

Sample No.	83-7	83-8	83-9	83-10	83-11	83-12	83-13
Tabellaria flocculosa	-	-	3,683,600	-	-	-	-
Trachyneis aspera	-	-	-	-	1,245,834	-	-
Chlorophyta	11,163,654	26,241,479	22,101,598	9,972,131	7,475,006	7,475,006	6,232,582
Chlamydomonas sp.	3,721,218	22,492,696	18,417,998	6,232,582	3,737,503	4,983,337	1,246,516
C. pulsatilla	3,721,218	3,748,783	3,683,600	3,739,549	3,737,503	2,491,669	4,986,066
Thalassomonas sp.	3,721,218	-	-	-	-	-	-
Chrysophyta	3,721,218	-	-	-	-	-	-
Unidentified	3,721,218	-	-	-	-	-	-
Euglenophyta	-	3,748,783	-	-	1,245,834	-	-
Euglena sp.	-	3,748,783	-	-	-	-	-
E. schmitzii	-	-	-	-	1,245,834	-	-

Table 8. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 5 - 8 August 1983.

Sample No.	83-14	83-15	83-16	83-17	83-18	83-19
Date	5-6 Aug	5-6 Aug	5-6 Aug	6-8 Aug	6-8 Aug	6-8 Aug
Station depth (m)	27-33	27-33	29-35	27-35	26-34	25-33
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	98,412,367	85,589,882	60,866,519	64,191,591	248,719,912	16,433,704
Bacillariophyta	97,747,419	84,295,867	59,588,961	63,552,579	245,738,680	16,329,619
Centrales	65,962,881	61,280,878	47,999,686	55,419,707	195,483,629	10,292,747
Chaetoceros affinis	-	-	-	-	-	80,954
C. brevis	7,846,391	7,394,374	8,212,874	14,406,800	72,401,347	1,110,229
C. decipiens	18,618,555	18,393,506	10,676,736	10,572,732	20,868,623	2,775,572
C. furcellatus	8,378,350	12,755,296	12,958,090	12,664,042	29,812,312	1,619,084
C. holsaticus	1,994,845	1,478,875	1,733,829	1,858,942	7,240,135	416,336
C. lauderi	-	-	-	-	425,890	-
C. septentrionalis	12,368,040	10,629,413	7,482,841	6,622,481	14,054,379	855,801
C. spores	1,329,897	647,008	547,525	813,287	2,981,232	208,168
C. wighami	6,117,525	3,512,328	3,467,658	3,834,068	19,590,953	1,237,443
Coscinodiscus sp.	132,990	-	-	-	-	-
C. angustelineatus	-	-	-	-	425,890	-
Cyclotella striata	132,990	92,430	-	58,092	-	34,695
Leptocylindrus danicus	265,979	92,430	-	58,092	-	127,214
Melosira arctica	531,959	-	-	-	-	-
Rhizosolenia sp.	-	92,430	-	-	-	-
Thalassiosira sp.	1,462,886	2,033,453	1,003,796	406,644	-	-
T. decipiens	6,782,474	3,974,476	1,916,337	4,124,527	27,682,868	1,746,297
T. nordenskioeldii	-	184,859	-	-	-	57,824

Table 8. (cont'd.)

Sample No.	83-14	83-15	83-16	83-17	83-18	83-19
T. oestrupii	-	-	-	-	-	23,130
Pennales	31,784,538	23,014,989	11,589,275	8,132,872	50,255,051	6,036,872
Achnanthes taeniata	6,383,505	3,327,468	3,102,641	1,045,655	8,943,696	855,801
Amphora inelegans var. *polita*	664,948	462,148	182,508	-	851,781	11,565
A. terroris	265,979	369,719	91,254	-	-	23,130
Cocconeis sp.	132,990	-	-	-	-	11,565
C. californica	-	-	91,254	-	-	-
C. scutellum	132,990	462,148	91,254	116,184	425,890	92,519
C. thumensis	-	-	-	-	-	11,565
Cylindrotheca closterium	930,928	462,148	638,779	580,919	1,277,671	335,382
Cymbella sp.	132,990	-	-	-	-	-
Diploneis didyma	-	184,859	-	-	-	-
D. smithii	-	-	-	-	-	11,565
Fragilaria bicapitata	-	92,430	-	-	-	-
F. islandica	3,723,711	369,719	730,033	-	-	-
F. pinnata	-	2,033,453	365,017	232,368	3,407,122	265,992
F. striatula	-	-	-	-	-	127,214
Fragilariopsis nana	-	-	-	-	-	208,168
Gomphonema exiguum var. *pachycladum*	-	-	-	-	-	23,130
Grammatophora arctica	-	92,430	-	-	-	-
G. hamulifera	-	-	91,254	-	-	-
Licmophora sp.	-	92,430	-	-	425,890	-
Navicula sp.	1,861,856	647,008	465,271	406,644	851,781	11,565
N. algida	-	-	-	-	-	11,565

Table 8. (cont'd.)

Sample No.	83-14	83-15	83-16	83-17	83-18	83-19
N. cancellata	132,990	-	91,254	-	-	92,519
N. debilissima	398,969	277,289	-	58,092	425,890	23,130
N. directa	-	184,859	-	-	425,890	
N. directa var. subtilis	132,990	184,859	91,254	-	-	-
N. forcipata	-	277,289	-	-	-	-
N. granii	-	1,016,726	-	-	-	11,565
N. grevillei	-	-	-	-	-	11,565
N. peregrina	531,959	184,859	-	-	425,890	69,389
N. salinarum	-	277,289	-	-	-	-
N. transitans	132,990	92,430	273,762	-	-	69,389
N. transitans var. derasa	398,969	184,859	-	58,092	1,277,671	11,565
N. trigonocephala	132,990	-	-	-	-	-
N. vanhoeffenii	132,990	-	91,254	58,092	-	-
Nitzschia sp.	-	92,430	-	232,368		
N. acicularis	3,457,732	2,310,742	1,277,558	1,684,666	6,388,354	936,756
N. actinastroides	265,979	277,289	91,254	-	-	-
N. cylindrus	9,841,236	6,470,078	3,285,150	2,323,677	15,757,940	1,561,259
N. delicatissima	132,990	-	91,254	232,368	-	-
N. frigida	132,990	369,719	-	-	1,277,671	104,084
N. frustulum	-	184,859	91,254	-	-	-
N. grunowii	-	92,430	-	871,379	6,388,354	728,588
N. linearis	1,063,917	554,578	91,254	-	425,890	46,260
N. seriata	-	831,867	91,254	58,092	425,890	323,817
Pinnularia sp.	-	-	-	-	425,890	-

Table 8. (cont'd.)

Sample No.	83-14	83-15	83-16	83-17	83-18	83-19
P. quadratarea var. *bicontracta*	-	-	91,254	-	-	-
Plagiogramma staurophorum	-	-	-	58,092	-	-
Pleurosigma elongatum	132,990	-	-	-	-	-
P. longum	132,990	462,148	-	58,092	-	11,565
Rhabdonema minutum	132,990	-	-	-	-	-
Stenoneis inconspicua var. *baculus*	132,990	-	91,254	58,092	425,890	23,130
Synedra pulchella	132,990	-	-	-	-	-
Trachyneis aspera	-	92,430	-	-	-	11,565
Chlorophyta	398,969	1,016,726	1,277,558	406,644	2,981,232	57,825
Chlamydomonas sp.	398,969	831,867	1,186,304	174,276	1,703,561	11,565
C. pulsatilla	-	184,859	91,254	174,276	1,277,671	46,260
Thalassomonas sp.	-	-	-	58,092	-	-
Chrysophyta	265,979	277,289	-	116,184	-	-
Phaeocystis pouchetii	265,979	277,289	-	116,184	-	-
Pyrrophyta	-	-	-	116,184	-	46,260
Prorocentrum sp.	-	-	-	58,092	-	-
P. rampii	-	-	-	-	-	11,565
Unidentified	-	-	-	58,092	-	34,695

Table 9. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 8 - 12 August 1983.

Sample No.	83-20	83-21	83-22	83-23	83-24	83-25	83-26
Date	8-10 Aug	8-10 Aug	8-10 Aug	8-10 Aug	10-12 Aug	10-12 Aug	10-12 Aug
Station depth (m)	26-36	24-34	23-34	24-34	27-39	24-36	24-36
Ice cover (cm)	0	0	0	0	0	0	0
Sedimentation rate ($cells.m^{-2}.day^{-1}$)	134,518,638	272,497,415	212,122,086	195,644,226	109,736,992	950,296,463	1,323,304,516
Bacillariophyta	128,985,739	265,226,201	211,774,914	192,864,202	109,390,800	935,091,719	1,304,318,393
Centrales	77,633,509	204,632,749	145,117,892	119,888,559	84,655,769	826,757,920	1,078,383,527
Biddulphia aurita	172,903	-	-	-	-	-	-
Chaetoceros brevis	4,841,288	19,389,905	6,943,440	12,857,614	4,726,439	81,725,495	89,234,779
C. decipiens	13,313,542	38,433,562	23,954,867	16,680,147	15,072,088	182,456,920	225,934,865
C. furcellatus	4,495,482	21,813,643	11,456,676	8,340,074	1,995,607	76,023,717	136,700,086
C. holsaticus	2,420,644	2,769,986	6,249,096	1,390,012	1,312,900	34,210,673	34,146,757
C. septentrionalis	4,322,578	11,426,194	4,513,236	9,382,583	2,730,831	32,310,080	53,161,145
C. spores	2,593,547	4,154,980	1,735,860	1,390,012	1,312,900	19,005,929	11,391,674
C. wighami	26,627,083	81,714,601	71,864,602	45,522,902	46,844,259	332,603,761	391,114,135
Coscinodiscus furcatus	172,903	-	-	-	-	-	-
Cyclotella striata	172,903	-	-	-	262,580	-	1,898,612
Leptocylindrus danicus	172,903	-	1,041,516	-	105,032	-	11,391,674
Melosira sp.	-	-	-	-	-	-	5,695,837
Thalassiosira decipiens	18,327,733	24,929,878	17,358,599	23,630,209	10,293,133	68,421,345	117,713,963
T. nordenskioeldii	-	-	-	695,006	-	-	-
Pennales	51,352,230	60,593,452	66,657,022	72,975,643	24,735,031	108,333,799	225,934,866
Achnanthes taeniata	12,276,123	5,193,725	10,415,160	9,382,583	5,934,306	5,701,779	66,451,431
Amphora inelegans var. *polita*	345,806	-	694,344	695,006	-	-	-

Table 9. (cont'd.)

Sample No.	83-20	83-21	83-22	83-23	83-24	83-25	83-26
A. terroris	172,903	-	-	-	52,516	-	-
Cocconeis californica	172,903	-	347,172	-	-	-	-
C. scutellum	345,806	346,248	1,735,860	-	105,032	-	5,695,837
C. scutellum var. parva	-	-	-	-	-	1,900,593	-
C. thumensis	-	-	-	347,503	52,516	-	-
Cylindrotheca closterium	2,420,644	5,193,725	3,471,720	5,907,552	1,417,932	5,701,779	9,493,062
Cymbella affinis	-	-	-	347,503	-	-	-
Diploneis litoralis	172,903	-	-	-	52,516	-	-
Fragilaria islandica	1,210,322	-	-	-	1,050,320	-	3,797,225
F. pinnata	1,901,935	2,423,738	1,388,688	2,085,018	472,644	9,502,965	5,695,837
F. striatula	1,037,419	692,497	347,172	-	105,032	-	-
Gomphonema sp.	172,903	-	-	-	-	-	-
G. augur	-	-	-	347,503	-	-	1,898,612
G. exiguum var. pachycladum	-	346,248	-	-	-	-	-
Grammatophora hamulifera	-	-	-	-	52,516	-	-
Licmophora sp.	-	-	-	347,503	-	-	-
Navicula sp.	172,903	346,248	-	-	52,516	-	-
N. ammophila	-	1,038,745	347,172	-	-	1,900,593	3,797,225
N. cancellata	345,806	-	-	-	52,516	5,701,779	-
N. crassirostris	-	346,248	-	-	-	-	-
N. debilissima	-	-	347,172	-	-		
N. directa	172,903	-	-	-	52,516	-	-
N. directa var. subtilis	172,903	-	-	1,042,509	-	-	1,898,612
N. granii	-	346,248	-	-	-	-	-

Table 9. (cont'd.)

Sample No.	83-20	83-21	83-22	83-23	83-24	83-25	83-26
N. grevillei	345,806	-	-	-	105,032	1,900,593	1,898,612
N. peregrina	-	692,497	347,172	1,737,515	210,064	-	-
N. transitans	691,613	692,497	694,344	3,127,528	682,708	-	-
N. transitans var. derasa	172,903	346,248	347,172	347,503	52,516	-	-
N. vanhoeffenii	345,806	-	2,083,032	1,390,012	577,676	7,602,372	7,594,449
Nitzschia acicularis	9,163,866	12,811,187	17,358,599	19,112,669	4,096,247	22,807,115	41,769,471
N. cylindrus	13,659,348	15,927,422	17,705,771	19,112,669	6,249,402	24,707,708	47,465,308
N. delicatissima	864,516	692,497	694,344	-	315,096	-	3,797,225
N. frigida	1,556,128	1,384,993	2,083,032	1,390,012	1,365,416	11,403,558	11,391,674
N. grunowii	1,729,031	9,694,952	4,166,064	3,127,528	472,644	5,701,779	5,695,837
N. linearis	172,903	346,248	347,172	-	-	-	-
N. seriata	1,210,322	1,384,993	1,041,516	1,737,515	787,740	3,801,186	7,594,449
Pinnularia quadratarea	-	346,248	-	347,503	-	-	-
P. quadratarea var. stuxbergii	-	-	-	347,503	-	-	-
Plagiogramma staurophorum	172,903	-	-	-	-	-	-
Pleurosigma elongatum	-	-	-	-	52,516	-	-
Rhabdonema arcuatum	-	-	-	347,503	-	-	-
R. minutum	-	-	-	-	52,516	-	-
Stenoneis inconspicua var. baculus	172,903	-	347,172	347,503	210,064	-	-
Synedra tabulata	-	-	-	-	52,516	-	-
Tabellaria flocculosa	-	-	347,172	-	-	-	-

Table 9. (cont'd.)

Sample No.	83-20	83-21	83-22	83-23	83-24	83-25	83-26
Chlorophyta	5,014,190	6,924,966	-	2,085,018	315,096	9,502,965	17,087,511
Chlamydomonas sp.	345,806	2,769,986	-	695,006	157,548	3,801,186	17,087,511
C. cysts	3,112,256	-	-	-	-	-	-
C. pulsatilla	1,556,128	4,154,980	-	1,390,012	-	3,801,186	-
Thalassomonas sp.	-	-	-	-	157,548	1,900,593	-
Chrysophyta	-	-	-	-	157,548	1,900,593	1,898,612
Phaeocystis pouchetii	-	-	-	-	157,548	1,900,593	1,898,612
Euglenophyta	-	346,248	-	-	-	-	-
Euglena schmitzii	-	346,248	-	-	-	-	-
Pyrrophyta	518,709	-	347,172	695,006	157,548	3,801,186	-
Goniaulax cysts	172,903	-	347,172	347,503	52,516	-	-
G. monilata	-	-	-	347,503	-	-	-
Prorocentrum sp.	345,806	-	-	-	105,032	1,900,593	-
Unidentified	-	-	-	-	-	1,900,593	-

Table 10. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 10 - 17 August 1983.

Sample No.	83-27	83-28	83-29	83-30	83-31	83-32
Date	10-12 Aug	12-15 Aug	12-15 Aug	12-15 Aug	15-17 Aug	15-17 Aug
Station depth (m)	23-34	28-39	23-34	25-35	27-35	25-32
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	1,137,268,768	1,033,600,911	834,565,605	865,114,025	681,511,769	809,617,907
Bacillariophyta	1,133,471,543	1,011,869,486	811,458,741	846,070,635	645,703,822	772,085,951
Centrales	930,320,030	901,854,149	732,623,555	760,375,377	588,411,108	707,745,455
Chaetoceros brevis	140,497,311	184,717,115	86,990,552	58,490,414	123,537,419	50,042,608
C. decipiens	225,934,865	226,821,752	138,641,192	156,427,850	118,166,227	66,127,732
C. furcellatus	87,336,166	120,881,053	144,078,102	176,831,483	222,009,275	337,787,603
C. holsaticus	36,073,634	14,940,355	17,669,956	12,242,180	16,113,576	16,085,124
C. septentrionalis	51,262,532	54,328,563	46,213,731	48,968,718	42,969,537	26,808,540
C. spores	13,290,286	8,149,284	6,796,137	13,602,422	-	7,148,944
C. wighami	277,197,397	228,179,966	207,961,788	221,719,475	1,160,768	130,468,228
Coscinodiscus sp.	1,898,612	-	-	1,360,242	-	-
C. angustelineatus	-	-	1,359,227	-	-	-
C. lacustris var. septentrionalis	5,695,836	-	-	-	-	-
Cyclotella striata	1,898,612	1,358,214	-	-	-	1,787,236
Leptocylindrus danicus	-	-	2,718,455	-	-	-
Melosira sp.	-	5,432,856	-	-	-	-
Thalassiosira sp.	-	1,358,214	1,359,227	-	-	-
T. decipiens	89,234,779	55,686,777	78,835,188	69,372,351	64,454,306	69,702,204
T. oestrupii	-	-	-	-	-	1,787,236
Triceratium arcticum	-	-	-	1,360,242	-	-

Table 10. (cont'd.)

Sample No.	83-27	83-28	83-29	83-30	83-31	83-32
Pennales	189,861,227	110,015,337	78,835,186	85,695,258	57,292,714	64,340,496
Achnanthes taeniata	28,479,185	17,656,783	14,951,501	14,962,664	7,161,590	5,361,708
Amphora terroris	1,898,612	1,358,214	-	4,080,727	-	-
Cocconeis californica	1,898,612	-	-	-	-	-
C. scutellum	1,898,612	4,074,642	4,077,682	4,080,727	-	3,574,472
C. thumensis	3,797,225	-	-	-	1,790,397	1,787,236
Cylindrotheca closterium	5,695,836	8,149,284	12,233,046	1,360,242	1,790,397	1,787,236
Diploneis litoralis	-	-	-	1,360,242	-	-
Fragilaria sp.	-	-	-	-	1,790,397	1,787,236
F. bicapitata	-	1,358,214	1,359,227	-	-	-
F. pinnata	11,391,674	8,149,284	1,359,227	4,080,727	3,580,795	1,787,236
F. striatula	26,580,572	-	1,359,227	-	8,951,987	-
Gomphonema sp.	-	-	-	-	-	1,787,236
G. augur	-	-	-	-	1,790,397	-
Grammatophora hamulifera	-	-	-	-	-	1,787,236
Licmophora sp.	-	1,358,214	-	-	-	1,787,236
Navicula sp.	-	2,716,428	-	1,360,242	-	-
N. ammophila	5,695,836	1,358,214	-	-	-	-
N. cancellata	-	-	-	-	-	1,787,236
N. directa var. subtilis	-	-	1,359,227	-	-	-
N. granii	-	-	-	1,360,242	-	-
N. grevillei	-	-	-	4,080,727	-	-
N. peregrina	-	1,358,214	-	-	-	-
N. transitans	7,594,449	-	2,718,455	8,161,453	1,790,397	1,787,236

Table 10. (cont'd.)

Sample No.	83-27	83-28	83-29	83-30	83-31	83-32
N. transitans var. *derasa*	-	2,716,428	-	-	-	1,787,236
N. vanhoeffenii	-	4,074,642	-	2,720,484	-	8,936,180
Nitzschia acicularis	17,087,511	23,089,639	6,796,137	12,242,180	3,580,795	17,872,360
N. cylindrus	68,350,043	16,298,569	16,310,728	20,403,633	16,113,576	5,361,708
N. delicatissima	-	4,074,642	-	-	-	-
N. frigida	-	-	4,077,682	1,360,242	5,371,192	1,787,236
N. grunowii	-	2,716,428	2,718,455	-	1,790,397	-
N. seriata	5,695,836	6,791,070	9,514,592	2,720,484	1,790,397	3,574,472
Stenoneis inconspicua var. *baculus*	1,898,612	1,358,214	-	1,360,242	-	-
Synedra tabulata	1,898,612	1,358,214	-	-	-	-
Chlorophyta	13,290,286	21,731,425	21,747,637	14,962,664	35,807,947	33,957,484
Chlamydomonas sp.	7,594,449	8,149,284	19,029,183	12,242,180	34,017,550	28,595,776
C. ballenyana	-	-	1,359,227	-	-	-
C. cysts	1,898,612	-	-	-	-	-
C. pulsatilla	3,797,225	13,582,141	1,359,227	2,720,484	1,790,397	-
Thalassomonas sp.	-	-	-	-	-	5,361,708
Chrysophyta	-	-	-	1,360,242	-	3,574,472
Distephanus sp.	-	-	-	-	-	1,787,236
Phaeocystis pouchetii	-	-	-	1,360,242	-	1,787,236

Table 10. (cont'd.)

Sample No.	83-27	83-28	83-29	83-30	83-31	83-32
Pyrrophyta	3,797,225	-	1,359,227	2,720,484	-	-
Goniaulax cysts	-	-	1,359,227	1,360,242	-	-
Prorocentrum sp.	3,797,225	-	-	1,360,242	-	-

Table 11. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 17 - 20 August 1983.
17 - 20 August 1983

Sample No.	83-33	83-34	83-35	83-36	83-37	83-38
Date	17-18 Aug	17-18 Aug	18-20 Aug	18-20 Aug	18-20 Aug	18-20 Aug
Station depth (m)	29-35	26-31	31-36	30-35	30-35	29-35
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	90,232,377	73,428,896	40,290,969	32,579,213	43,788,862	53,063,833
Bacillariophyta	84,707,947	65,487,527	36,713,006	28,559,021	38,860,690	42,922,327
Centrales	79,183,516	57,776,344	31,786,821	26,575,032	34,240,530	38,978,388
Chaetoceros brevis	8,747,016	3,682,954	3,111,271	2,610,514	4,774,167	6,095,175
C. decipiens	11,624,324	6,905,539	2,229,744	1,931,780	3,850,135	5,070,776
C. furcellatus	32,225,849	23,593,925	14,882,247	11,225,210	10,831,712	11,524,490
C. holsaticus	2,416,939	2,186,754	1,348,218	261,051	770,027	870,739
C. septentrionalis	5,294,247	2,762,216	1,970,472	1,357,467	2,926,102	2,458,558
C. spores	345,277	230,185	362,982	156,631	564,686	307,320
C. wighami	10,358,309	11,394,140	4,926,179	5,586,500	5,133,513	8,451,293
Coscinodiscus sp.	230,185	-	-	-	-	-
C. lacustris var. *septentrionalis*	-	-	-	-	102,670	204,880
Cyclotella striata	-	-	-	-	51,335	102,440
Leptocylindrus danicus	-	-	-	-	51,335	-
Thalassiosira sp.	115,092	-	-	104,421	308,011	-
T. decipiens	7,826,278	7,020,631	2,955,708	3,341,458	4,876,837	3,892,717
Pennales	5,524,431	7,711,183	4,926,185	1,983,989	4,620,160	3,943,939
Achnanthes taeniata	575,462	1,496,200	674,109	261,051	975,367	819,519
A. inelegans var. *polita*	-	-	-	-	-	102,440
Cocconeis dirupta	-	-	-	52,210	-	-

Table 11. (cont'd.)

Sample No.	83-33	83-34	83-35	83-36	83-37	83-38
C. scutellum	-	115,092	51,855	-	102,670	-
C. scutellum var. parva	-	-	-	-	51,335	51,220
C. thumensis	347,277	-	-	-	-	-
Cylindrotheca closterium	230,185	115,092	155,564	-	205,341	153,660
Diploneis litoralis	-	-	103,709	52,210	102,670	-
Fragilaria sp.	115,092	-	-	-	-	-
F. islandica	805,646	-	-	-	-	-
F. pinnata	345,277	230,185	362,982	208,841	513,351	256,100
F. striatula	-	115,092	-	-	51,335	102,440
Fragilariopsis nana	-	-	51,855	-	-	-
Gomphonema exiguum var. pachycladum	-	-	51,855	-	-	-
Grammatophora angulosa	-	-	-	52,210	51,335	51,220
G. hamulifera	-	-	-	-	-	51,220
Gyrosigma distortum	-	-	-	52,210	-	-
Navicula sp.	-	115,092	-	-	-	204,880
N. ammophila	-	-	-	-	-	51,220
N. cancellata	-	115,092	-	-	-	-
N. directa	-	115,092	-	-	51,335	-
N. granii	-	-	933,381	-	-	-
N. grevillei	-	-	-	52,210	-	-
N. peregrina	-	-	51,855	-	51,335	51,220
N. transitans	-	345,277	51,855	-	205,341	102,440
N. transitans var. derasa	115,092	-	-	-	-	-
N. vanhoeffenii	-	-	674,109	208,841	-	102,440

Table 11. (cont'd.)

Sample No.	83-33	83-34	83-35	83-36	83-37	83-38
Nitzschia acicularis	920,739	690,554	881,527	574,313	359,346	512,200
N. cylindrus	690,554	1,381,108	259,273	156,631	564,686	563,420
N. delicatissima	-	-	-	-	-	51,220
N. frigida	345,277	115,092	103,709	52,210	205,341	307,320
N. grunowii	115,092	1,266,015	103,709	104,421	462,016	204,880
N. linearis	230,185	115,092	155,564	156,631	51,335	-
N. seriata	460,369	1,266,016	155,564	-	410,681	153,660
Pinnularia sp.	-	-	-	-	102,670	-
P. quadratarea var. bicuneata	115,092	-	-	-	-	-
Stenoneis inconspicua var. baculus	115,092	115,092	-	-	-	-
Synedra sp.	-	-	-	-	51,335	51,220
S. tabulata	-	-	51,855	-	-	-
Tabellaria flocculosa	-	-	-	-	51,335	-
Trachyneis aspera	-	-	51,855	-	-	-
Chlorophyta	5,179,154	7,596,093	3,526,108	3,550,299	4,004,140	1,075,619
Chlamydomonas sp.	5,064,062	7,365,908	2,644,581	3,341,458	3,644,794	-
C. ballenyana	-	-	-	52,210	-	-
C. pulsatilla	115,092	230,185	207,418	156,631	359,346	1,075,619
C. tetraolaris	-	-	622,254	-	-	-
Thalassomonas sp.	-	-	51,855	-	-	-

Table 11. (cont'd.)

Sample No.	83-33	83-34	83-35	83-36	83-37	83-38
Chrysophyta	-	115,092	-	-	51,335	153,660
Distephanus sp.	-	-	-	-	51,335	-
Phaeocystis pouchetii	-	115,092	-	-	-	153,660
Euglenophyta	115,092	115,092	-	-	-	-
Euglena schmitzii	115,092	115,092	-	-	-	-
Pyrrophyta	230,184	115,092	-	-	51,335	-
Goniaulax cysts	-	115,092	-	-	-	-
Oxytoxum sp.	115,092	-	-	-	-	-
Prorocentrum sp.	115,092	-	-	-	51,335	-
Unidentified cysts	-	-	51,855	469,893	821,362	8,912,227

Table 12. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 20 -26 August 1983.

Sample No.	83-39	83-40	83-41	83-42	83-43	83-44
Date	20-22 Aug	20-22 Aug	20-22 Aug	20-22 Aug	22-26 Aug	22-26 Aug
Station depth (m)	29-35	29-36	28-34	30-37	25-34	27-35
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	31,011,778	23,793,076	22,059,925	25,470,156	14,946,140	288,401,503
Bacillariophyta	26,589,136	21,184,887	18,596,411	19,768,679	13,935,915	267,734,295
Centrales	24,404,456	18,576,701	13,800,774	15,505,889	11,967,273	234,854,642
Chaetoceros brevis	2,131,394	1,330,709	745,988	1,758,400	569,870	6,575,930
C. decipiens	1,225,551	958,111	959,127	1,012,412	595,773	21,606,627
C. furcellatus	11,882,519	7,984,255	6,447,465	6,181,041	2,771,641	77,971,741
C. holsaticus	106,570	159,685	159,855	319,709	103,613	-
C. septentrionalis	1,545,260	1,383,938	1,278,836	586,133	466,257	26,303,720
C. spores	266,424	53,228	53,285	53,285	129,516	939,419
C. wighami	1,491,975	2,821,104	1,438,691	1,118,982	2,201,771	21,606,627
Coscinodiscus sp.	53,285	-	53,285	-	-	-
C. angustelineatus	-	-	106,570	53,285	25,903	-
C. lacustris var. septentrionalis	159,855	53,228	-	106,570	77,710	-
Cyclotella striata	-	-	-	-	25,903	-
Leptocylindrus danicus	-	-	-	-	-	1,878,837
Thalassiosira sp.	-	106,457	-	-	-	-
T. decipiens	5,541,623	3,725,986	2,504,387	4,316,072	4,973,413	77,971,741
T. nordenskioeldii	-	-	53,285	-	25,903	-
Pennales	2,184,680	2,608,186	4,795,637	4,262,790	1,968,642	32,879,653
Achnanthes taeniata	266,424	479,055	266,424	1,118,982	284,935	9,394,186

Table 12. (cont'd.)

Sample No.	83-39	83-40	83-41	83-42	83-43	83-44
Amphora inelegans var. polita	-	106,457	-	-	103,613	-
Cocconeis scutellum	-	-	53,285	159,855	-	939,419
Cylindrotheca closterium	-	106,457	-	159,855	103,613	-
Cymbella affinis	-	-	53,285	-	-	-
Diploneis bomboides	-	-	-	53,285	25,903	-
Fragilaria bicapitata	53,285	53,228	-	-	-	-
F. pinnata	319,709	159,685	106,570	266,424	233,129	1,878,837
F. striatula	-	106,457	-	319,709	-	2,818,256
Gomphonema sp.	-	53,228	-	53,285	-	-
Grammatophora angulosa	-	53,228	-	-	25,903	-
G. arctica	-	-	-	-	25,903	-
Licmophora sp.	-	-	-	53,285	-	939,419
Navicula sp.	-	159,685	53,285	106,570	-	-
N. ammophila	-	53,228	53,285	53,285	-	-
N. crassirostris	-	-	-	-	-	939,419
N. cryptocephala	-	-	-	53,28	-	-
N. digitoradiata	-	53,228	-	-	-	-
N. directa	-	-	-	106,570	51,806	939,419
N. directa var. subtilis	-	-	159,855	106,570	-	-
N. granii	-	-	3,143,805	-	-	-
N. peregrina	-	53,228	-	-	25,903	-
N. transitans	-	53,228	-	-	-	-
N. transitans var. derasa	53,285	-	-	-	-	-
N. vanhoeffenii	159,855	-	53,285	-	25,903	1,878,837

Table 12. (cont'd.)

Sample No.	83-39	83-40	83-41	83-42	83-43	83-44
Nitzschia acicularis	213,139	372,599	213,139	213,139	259,032	4,697,093
N. cylindrus	479,564	212,913	319,709	532,848	155,419	1,878,837
N. delicatissima	213,139	-	-	-	51,806	939,419
N. frigida	-	106,457	53,285	106,570	362,645	4,697,093
N. grunowii	106,570	53,228	-	586,133	-	-
N. linearis	53,285	-	-	53,285	25,903	-
N. longissima	53,285	-	-	-	-	-
N. seriata	159,855	212,913	159,855	106,570	25,903	939,419
Pinnularia quadratarea	-	-	-	-	25,903	-
Pleurosigma longum	53,285	53,228	53,285	53,285	-	-
Stenoneis inconspicua var. baculus	-	-	-	-	-	939,419
Synedra sp.	-	53,228	-	-	77,710	-
Tabellaria flocculosa	-	-	-	-	77,710	-
Trachyneis aspera	-	53,228	53,285	-	-	-
Chlorophyta	426,279	319,370	426,278	1,971,539	259,032	1,878,837
Chlamydomonas sp.	-	-	213,139	532,848	103,613	-
C. pulsatilla	426,279	319,370	213,139	1,385,406	155,419	1,878,837
Thalassomonas sp.	-	-	-	53,285	-	-
Chrysophyta	-	212,913	799,273	213,139	77,710	-
Phaeocystis pouchetii	-	212,913	799,273	213,139	77,710	-

Table 12. (cont'd.)

Sample No.	83-39	83-40	83-41	83-42	83-43	83-44
Pyrrophyta	53,285	-	213,139	1,971,539	-	-
Prorocentrum sp.	53,285	-	213,139	1,971,539	-	-
Unidentified cysts	3,943,078	2,075,906	2,024,824	1,545,260	673,483	18,788,371

Table 13. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 22 - 29 August 1983.

Sample No.	83-45	83-46	83-47	83-48	83-49	83-50
Date	22-26 Aug	22-26 Aug	26-29 Aug	26-29 Aug	26-29 Aug	26-29 Aug
Station depth (m)	25-34	25-34	25-34	25-34	27-35	26-35
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	408,436,476	19,841,168	577,110,180	31,065,604	31,337,833	465,659,336
Bacillariophyta	373,695,902	18,754,675	514,999,667	29,530,178	29,336,786	399,507,174
Centrales	353,039,347	16,555,845	487,826,318	26,744,981	27,014,141	374,862,251
Chaetoceros brevis	18,778,689	620,844	16,821,597	178,538	393,063	12,971,012
C. decipiens	21,595,492	1,112,346	31,055,256	2,428,116	1,286,388	14,268,113
C. furcellatus	162,435,657	3,802,670	161,746,127	7,641,423	9,969,504	143,978,235
C. holsaticus	5,633,607	336,291	6,469,845	107,123	214,398	1,297,101
C. septentrionalis	21,595,492	957,135	25,879,380	999,812	821,859	10,376,810
C. spores	-	77,606	-	178,538	107,199	-
C. wighami	30,045,902	2,354,034	91,871,800	7,248,640	6,682,069	83,014,478
Coscinodiscus sp.	-	-	-	107,123	71,466	1,297,101
C. angustelineatus	938,934	-	-	-	-	-
C. lacustris var. *septentrionalis*	-	77,606	-	-	-	-
Cyclotella striata	-	103,474	-	71,415	35,733	-
Leptocylindrus danicus	-	-	-	-	-	1,297,101
Melosira arctica	-	51,737	-	-	-	-
Thalassiosira decipiens	92,015,574	7,036,233	153,982,313	7,784,253	7,432,462	106,362,300
T. nordenskioeldii	-	25,869	-	-	-	
Pennales	20,656,555	2,198,830	27,173,349	2,785,197	2,322,645	24,644,923
Achnanthes groenlandica	-	25,869	-	-	-	

Table 13. (cont'd.)

Sample No.	83-45	83-46	83-47	83-48	83-49	83-50
A. taeniata	938,934	362,159	-	392,783	357,330	2,594,202
Amphora inelegans var. polita	-	-	-	-	-	1,297,101
A. terroris	-	-	-	-	71,466	-
Cocconeis californica	-	25,869	-	107,123	-	-
C. pseudomarginata	-	-	-	-	35,733	1,297,101
C. scutellum	-	310,422	-	178,538	107,199	-
Cylindrotheca closterium	1,877,869	77,606	-	107,123	-	-
Diploneis smithii	-	-	-	35,708	-	-
Fragilaria pinnata	938,934	51,737	6,469,845	249,953	178,665	3,891,304
F. striatula	-	77,606	-	35,708	-	-
Gomphonema sp.	938,934	103,474	-	-	-	-
G. exiguum var. pachycladum	938,934	-	-	-	-	-
Grammatophora hamulifera	938,934	-	-	-	-	-
Navicula sp.	-	25,869	-	35,708	-	-
N. ammophila	938,934	25,869	-	35,708	-	-
N. directa var. subtilis	-	25,869	3,881,907	35,708	71,466	-
N. grevillei	-	-	1,293,969	35,708	-	-
N. peregrina	-	-	-	35,708	35,733	
N. pygmaea	-	25,869	-	-	-	-
N. transitans	-	103,474	-	142,830	142,932	1,297,101
N. transitans var. derasa	-	-	-	35,708	-	-
N. trigonocephala	-	-	-	-	35,733	-
N. vanhoeffenii	-	51,737	-	-	250,131	-
Nitzschia acicularis	3,755,738	336,291	2,587,938	357,076	321,597	3,891,304

Table 13. (cont'd.)

Sample No.	83-45	83-46	83-47	83-48	83-49	83-50
N. cylindrus	2,816,803	181,080	6,469,845	357,076	250,131	5,188,405
N. delicatissima	-	-	-	107,123	-	-
N. frigida	2,816,803	51,737	-	107,123	250,131	1,297,101
N. grunowii	3,755,738	25,869	3,881,907	107,123	142,932	3,891,304
N. linearis	-	-	-	-	35,733	-
N. seriata	-	181,080	2,587,938	107,123	-	
Pinnularia sp.	-	-	-	71,415	35,733	-
Pleurosigma longum	-	25,869	-	-	-	-
Stenoneis inconspicua var. *baculus*	-	25,869	-	-	-	-
Synedra sp.	-	77,606	-	35,708	-	-
S. tabulata	-	-	-	35,708	-	-
Tabellaria flocculosa	-	-	-	35,708	-	-
Chlorophyta	-	77,606	3,881,907	71,415	-	6,485,506
Chlamydomonas sp.	-	51,737	-	-	-	1,297,101
C. pulsatilla	-	25,869	3,881,907	71,415	-	5,188,405
Chrysophyta	1,877,869	232,817	5,175,876	178,538	321,597	2,594,202
Phaeocystis pouchetii	1,877,869	232,817	5,175,876	178,538	321,597	2,594,202
Pyrrophyta	-	25,869	-	35,708	-	-
Goniaulax sp.	-	25,869	-	-	-	-
Prorocentrum sp.	-	-	-	35,708	-	-

Table 13. (cont'd.)

Sample No.	83-45	83-46	83-47	83-48	83-49	83-50
Unidentified cysts	32,862,705	750,201	53,052,730	1,249,765	1,679,450	57,072,454

Table 14. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 9 - 21 March 1984.

Sample No.	84-2	84-3	84-4	84-5	84-6	84-7
Date	9-14 March	9-14 March	14-17 March	14-17 March	17-21 March	17-21 March
Station depth (m)	32-39	31-38	29-40	29-40	29-41	29-41
Ice cover (cm)	157	157	157	157	157	157
Sedimentation rate (cells.m^{-2}.day^{-1})	2,089,315	2,511,960	2,775,020	3,076,991	3,182,852	9,276,988
Bacillariophyta	1,644,409	2,013,037	2,156,993	2,262,691	2,472,538	7,052,665
Centrales	854,917	984,829	881,072	961,141	607,291	3,078,718
Chaetoceros borealis	-	-	-	13,349	-	-
C. brevis	17,447	8,677	26,582	66,746	70,489	94,941
C. decipiens	21,809	13,015	37,100	66,746	92,178	189,811
C. furcellatus	662,996	616,061	671,190	567,340	103,023	2,115,819
C. holsaticus	-	-	-	-	5,422	-
C. septentrionalis	-	4,338	-	6,675	43,378	40,689
Coscinodiscus sp.	-	-	-	6,675	5,422	-
C. apiculatus	8,724	-	-	-	-	-
Cyclotella sp.	-	4,338	-	-	16,267	-
Melosira italica	8,724	-	-	-	-	-
Thalassiosira spp.	100,322	255,969	106,327	206,912	222,312	434,014
T. decipiens	34,895	82,431	39,873	26,698	48,800	203,444
Pennales	789,492	1,028,208	1,275,921	1,301,550	1,865,247	3,973,947
Achnanthes sp.	4,362	-	-	-	-	-
A. taeniata	69,789	104,123	86,391	180,214	124,712	705,273
Amphiprora kjellmanii	8,724	-	-	-	-	-
A. kjellmanii var. kariana	4,362	8,677	-	-	-	-
Amphora binodis	-	8,677	-	13,349	-	-

Table 14. (cont'd.)

Sample No.	84-2	84-3	84-4	84-5	84-6	84-7
A. inelegans	17,447	43,385	13,291	-	54,222	54,252
A. laevis var. laevissima	-	-	-	-	-	27,126
A. terroris	-	30,369	33,227	6,675	43,378	67,815
Campylodiscus angularis	-	4,338	-	-	-	-
Cocconeis sp.	4,362	4,338	-	-	10,844	27,126
C. californica	-	-	-	-	-	40,689
C. pseudomarginata	-	13,015	-	-	27,111	13,563
C. scutellum	21,809	8,677	13,291	6,675	27,111	40,689
C. scutellum var. parva	8,724	-	6,645	20,024	16,267	54,252
C. thumensis	4,362	-	19,936	6,675	5,422	13,563
Cylindrotheca closterium	-	-	13,291	6,675	-	-
Cymbella sp.	-	-	-	-	5,422	-
Diploneis bombus	4,362	-	-	6,675	16,267	-
D. borealis	-	-	-	-	5,422	-
D. didyma	-	-	-	-	5,422	-
D. litoralis	8,724	21,692	-	13,349	10,844	-
D. smithii	-	4,338	-	6,675	16,267	27,126
Eunotia sp.	-	4,338	-	-	-	-
Fragilaria sp.	-	-	-	-	16,267	40,689
F. bicapitata	4,362	-	-	6,675	5,422	-
F. pinnata	-	177,877	152,845	120,143	211,468	474,703
Gomphonema sp.	47,980	34,708	39,873	26,698	37,956	54,252
G. augur	17,447	-	13,291	-	-	13,563
G. exiguum var. pachycladum	8,724	8,677	6,645	-	-	-

Table 14. (cont'd.)

Sample No.	84-2	84-3	84-4	84-5	84-6	84-7
G. gracile	-	-	-	20,024	16,267	27,126
Grammatophora sp.	4,362	-	-	-	-	-
G. arctica	8,724	8,677	13,291	6,675	10,844	13,563
Gyrosigma balticum	-	4,338	-	-	-	-
Licmophora sp.	8,724	-	-	-	-	-
Navicula sp.	17,447	13,015	13,291	20,024	65,067	40,689
N. algida	-	-	-	13,349	5,422	-
N. ammophila	30,533	17,354	13,291	53,397	32,533	94,491
N. crassirostris	-	-	-	13,349	-	-
N. crucigeroides	-	-	-	-	5,422	-
N. cryptocephala	-	-	13,291	-	5,422	-
N. debilissima	13,085	-	19,936	6,675	43,378	40,689
N. directa	4,362	13,015	13,291	6,675	27,111	-
N. directa var. subtilis	-	-	26,582	-	48,800	13,563
N. forcipata	-	-	-	6,675	-	-
N. grevillei	-	13,015	-	-	5,422	27,126
N. imperfecta	4,362	4,338	6,645	-	5,422	-
N. kariana	-	-	-	-	5,422	-
N. latissima	-	-	-	-	16,267	13,563
N. peregrina	-	4,338	6,645	-	21,689	-
N. pygmaea	-	-	-	-	-	40,689
N. solitaria	-	17,354	6,645	13,349	10,844	94,941
N. transitans	8,724	17,354	13,291	40,048	5,422	54,252
N. transitans var. derasa	13,085	17,354	19,936	20,024	43,378	54,252

Table 14. (cont'd.)

Sample No.	84-2	84-3	84-4	84-5	84-6	84-7
N. trigonocephala	-	8,677	6,645	-	-	-
N. vanhoeffenii	-	-	6,645	-	21,689	-
Nitzschia sp.	13,085	13,015	6,645	-	-	-
N. acicularis	30,533	69,415	112,973	113,468	65,067	406,888
N. cylindrus	74,151	95,446	206,009	140,166	157,245	596,769
N. frigida	4,362	39,046	13,291	26,698	124,712	13,563
N. frustulum	69,789	30,369	93,036	66,746	65,067	108,504
N. gelida	17,447	4,338	39,873	-	37,956	81,378
N. grunowii	78,513	78,092	79,745	120,143	59,645	189,881
N. linearis	95,960	26,031	86,391	146,841	244,001	325,511
N. marginulata	-	-	-	-	5,422	13,563
N. seriata	-	13,015	6,645	-	-	-
N. tergestina	30,533	13,015	26,582	-	-	-
Pinnularia quadratarea	-	-	-	-	10,844	13,563
P. quadratarea var. bicontracta	4,362	4,338	-	-	-	-
P. quadratarea var. stuxbergii	-	-	-	-	5,422	-
Pleurosigma sp.	-	-	-	-	5,422	13,563
P. angulatum	4,362	-	-	-	-	-
P. latiusculum	-	4,338	-	-	5,422	-
P. longum	-	-	-	-	16,267	-
P. marinum	-	-	-	-	-	13,563
Pseudonitzschia delicatissima	-	-	-	20,024	-	-
Rhabdonema arcuatum	4,362	-	-	-	-	-
R. minutum	-	-	6,645	-	-	-

Table 14. (cont'd.)

Sample No.	84-2	84-3	84-4	84-5	84-6	84-7
Stenoneis inconspicua var. *baculus*	-	-	6,645	-	5,422	-
Synedra sp.	-	8,677	6,645	13,349	5,422	-
S. tabulata	-	-	6,645	-	5,422	27,126
Tabellaria flocculosa	13,085	8,677	-	13,349	10,844	-
Trachyneis aspera	-	4,338	-	-	-	-
Chlorophyta	431,820	498,923	618,027	807,625	688,626	2,210,760
Chlamydomonas sp.	392,563	464,215	591,445	774,252	628,981	2,088,693
C. ballenyana	30,533	17,354	13,291	26,698	59,645	40,689
C. pulsatilla	8,724	17,354	13,291	6,675	-	54,252
C. cysts	-	-	-	-	-	27,126
Chrysophyta	4,362	-	-	-	16,266	13,563
Dinobryon sp.	-	-	-	-	5,422	-
Phaeocystis pouchetii	4,362	-	-	-	10,844	13,563
Euglenophyta	-	-	-	6,675	-	-
Euglena proxima	-	-	-	6,675	-	-
Pyrrophyta	8,724	-	-	-	5,422	-
Goniaulax cysts	4,362	-	-	-	-	-
Gymnodinium cysts	4,362	-	-	-	-	-
Prorocentrum rampii	-	-	-	-	5,422	-

Table 15. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 25 May - 4 June 1984

Sample No.	84-9	84-10	84-15	84-16
Date	25-29 May	25-29 May	29 May-4 June	29 May-4 June
Station depth (m)	29-37	30-37	29-38	29-38
Ice cover (cm)	168	168	168	168
Sedimentation rate (cells.m^{-2}.day^{-1})	17,465,157	11,876,189	75,495,334	67,206,152
Bacillariophyta	16,823,888	11,461,466	73,327,393	66,185,945
Centrales	11,391,961	7,238,821	63,890,476	53,305,825
Chaetoceros decipiens	-	-	127,526	-
C. furcellatus	10,524,357	6,635,586	61,850,061	51,775,515
Coscinodiscus lacustris var. *septentrionalis*	339,495	226,213	127,526	255,052
Cyclotella sp.	75,443	-	127,526	-
C. striata	-	113,107	-	-
Thalassiosira sp.	37,722	75,404	127,526	637,629
T. decipiens	377,222	188,511	1,402,785	637,629
Triceratium montereyii	37,722	-	127,526	-
Pennales	5,431,927	4,222,645	9,436,917	12,880,120
Achnanthes groenlandica	37,722	-	-	255,052
A. taeniata	264,052	-	637,629	1,785,363
Amphiprora kjellmanii	-	37,702	-	-
Amphora inelegans	-	-	510,104	-
A. laevis var. *laevissima*	37,722	113,107	-	-
A. terroris	264,052	188,511	382,578	382,578
Campylodiscus sp.	-	-	-	127,526
Cocconeis sp.	150,887	-	-	-

Table 15. (cont'd.)

Sample No.	84-9	84-10	84-15	84-16
C. pseudomarginata	-	113,107	-	127,526
C. scutellum	113,165	-	-	382,578
C. scutellum var. parva	-	75,404	-	255,052
C. thumensis	-	75,404	-	510,104
Cylindrotheca closterium	-	-	127,526	-
Cymbella sp.	37,722	-	-	255,052
C. affinis	37,722	-	-	-
Diploneis bombus	150,887	-	-	-
D. litoralis	37,722	37,702	-	127,526
D. smithii	37,722	37,702	-	127,526
Eunotia rhyncocephala	-	-	-	127,526
Fragilaria sp.	75,443	113,107	127,526	-
F. pinnata	754,434	490,129	2,295,466	1,275,259
Gomphonema sp.	113,165	150,809	127,526	-
G. augur	37,722	-	-	127,526
G. exiguum var. pachycladum	37,722	37,702	255,052	1,275,259
Grammatophora arctica	-	-	255,052	255,052
Gyrosigma balticum	37,722	-	-	-
G. fasciola	-	-	-	127,526
Licmophora sp.	-	-	-	127,526
Navicula sp.	37,722	113,107	127,526	127,526
N. debilissima	75,443	-	-	510,104
N. directa	113,165	37,702	127,526	-
N. directa var. subtilis	-	37,702	127,526	-

Table 15. (cont'd.)

Sample No.	84-9	84-10	84-15	84-16
N. grevillei	-	75,404	-	255,052
N. peregrina	113,165	-	-	-
N. rhynchocephala	-	-	127,525	-
N. transitans	75,443	150,809	-	-
N. transitans var. derasa	75,443	-	255,052	127,526
N. trigonocephala var. depressa	-	37,702	-	-
N. valida	37,722	37,702	-	-
Nitzschia acicularis	113,165	226,213	-	127,526
N. cylindrus	980,764	565,533	1,912,888	1,657,837
N. frigida	264,052	188,511	-	-
N. grunowii	264,052	113,107	765,155	892,681
N. linearis	943,043	942,555	1,275,259	892,681
N. tergestina	-	37,702	-	-
Pinnularia quadratarea var. gibbosa	-	37,702	-	-
Plagiogramma staurophorum	-	-	-	127,526
Pleurosigma marinum	-	37,702	-	-
Rhabdonema arcuatum	37,722	37,702	-	-
Synedra sp.	75,443	37,702	-	-
S. tabulata	-	-	-	382,578
Tabellaria flocculosa	-	-	-	127,526
Trachyneis aspera	-	37,702	-	-

Table 15. (cont'd.)

Sample No.	84-9	84-10	84-15	84-16
Chlorophyta	565,825	339,319	1,912,889	892,681
Ankistrodesmus falcatus	264,052	-	-	-
Chlamydomonas sp.	-	-	-	255,052
C. ballenyana	226,330	75,404	510,104	637,629
C. pulsatilla	75,443	263,915	1,402,785	-
Chrysophyta	37,722	37,702	127,526	-
Dictyocha sp.	37,722	37,702	-	-
Phaeocystis pouchetii	-	-	127,526	-
Euglenophyta	37,722	-	-	-
Euglena schmitzii	37,722	-	-	-
Pyrrophyta	-	37,702	127,526	127,526
Goniaulax sp.	-	37,702	127,526	-
Gyrodinium sp.	-	-	-	127,526

Table 16. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 28 July - 2 August 1984.

Sample No.	84-20	84-21	84-22	84-24	84-25	84-26	84-27
Date	28-30 July	28-30 July	28-30 Jul	30 Jul-2 Aug	30 Jul-2 Aug	30 Jul-2 Aug	30 Jul-2 Aug
Station depth (m)	28-38	28-38	28-38	28-38	29-40	30-40	32-42
Ice cover (cm)	0	0	0	0	0	0	0
Sedimentation rate (cells $m^{-2}.day^{-1}$)	92,517,137	136,244,145	16,878,982	285,723,109	7,917,957	219,526,688	13,525,198
Bacillariophyta	92,133,567	135,937,289	16,784,216	284,450,968	7,890,003	218,767,317	13,436,333
Centrales	71,113,921	123,279,472	15,689,134	266,640,981	6,646,054	203,539,898	12,974,236
Chaetoceros affinis	-	76,714	-	-	-	-	-
C. decipiens	920,569	1,457,567	558,070	9,159,423	132,781	6,852,341	497,642
C. furcellatus	65,743,938	117,832,775	11,298,282	250,103,134	5,919,252	188,058,684	12,174,454
C. holsaticus	76,714	-	-	-	-	-	-
C. septentrionalis	153,428	76,714	10,530	254,428	41,931	1,015,162	-
C. spores	-	-	-	1,017,714	-	253,790	-
Coscinodiscus lacustris var. *septentrionalis*	-	76,714	21,059	254,428	6,988	-	-
Cyclotella sp.	-	-	10,530	-			
Thalassiosira sp.	230,142	-	-	-	13,977	-	106,638
T. decipiens	3,989,130	3,758,988	3,790,663	5,851,854	531,125	7,359,921	195,502
Pennales	21,019,646	12,657,817	1,095,082	17,809,987	1,243,949	15,227,419	462,097
Achnanthes groenlandica	-	-	10,530	-	-	-	-
A. taeniata	230,142	1,457,567	63,178	508,857	34,942	-	17,773
Amphiprora sp.	-	-	10,530	-	-	-	-
A. kjellmanii	76,714	-	-	-	-	-	-
A. inelegans	306,856	-	-	1,017,714	27,954	-	35,546
A. terroris	460,284	76,714	31,589	-	6,988	253,790	-

Table 16. (cont'd.)

Sample No.	84-20	84-21	84-22	84-24	84-25	84-26	84-27
Cocconeis sp.	-	-	10,530	-	-	-	-
C. californica	76,714	76,714	21,059	-	-	253,790	-
C. pseudomarginata	306,856	-	-	254,428	-	-	-
C. scutellum	76,714	153,428	21,059	254,428	6,988	-	-
C. scutellum var. parva	230,142	230,142	-	-	-	253,790	-
C. thumensis	153,428	-	-	254,428	-	-	17,773
Cylindrotheca closterium	-	76,714	-	-	20,965	253,790	-
Cymbella sp.	76,714	-	-	-	-	-	-
C. affinis	-	76,714	-	-	-	-	-
Diploneis bombus	153,428	-	-	-	-	-	-
D. smithii	76,714	-	-	-	-	-	-
Eunotia sp.	76,714	-	-	-	-	-	-
Fragilaria sp.	153,428	306,856	-	508,857	27,954	-	-
F. bicapitata	76,714	153,428	-	508,857	-	-	17,773
F. pinnata	1,073,997	1,380,853	94,767	2,289,856	55,908	761,371	35,546
F. striatula	-	1,610,995	31,589	-	-	-	-
Gomphonema sp.	76,714	-	-	-	-	-	-
G. augur	-	76,714	-	254,428	-	-	-
G. exiguum var. pachycladum	76,714	-	-	254,428	-	-	-
Grammatophora arctica	-	-	21,059	-	6,988	253,790	-
Gyrosigma balticum	153,428	-	-	-	-	-	-
Licmophora sp.	76,714	-	-	-	-	-	-
Navicula sp.	460,284	-	31,589	-	27,954	253,790	17,773
N. algida	-	-	-	-	-	253,790	-

Table 16. (cont'd.)

Sample No.	84-20	84-21	84-22	84-24	84-25	84-26	84-27
N. debilissima	153,428	230,142	-	254,428	27,954	253,790	35,546
N. directa	153,428	-	-	508,857	-	-	-
N. lyra	-	-	10,530	-	-	-	-
N. peregrina	-	153,428	-	-	6,988	-	-
N. rhynchocephala	76,714	-	-	-	-	-	-
N. transitans	153,428	-	-	-	-	-	-
N. transitans var. derasa	383,570	306,856	31,589	254,428	27,954	253,790	-
N. valida	76,714	76,714	10,530	-	6,988	-	-
Nitzschia sp.	-	-	-	-	-	-	35,546
N. acicularis	460,284	306,856	21,059	508,857	41,931	253,790	-
N. cylindrus	3,221,990	4,372,701	421,185	6,615,139	405,333	8,121,293	231,048
N. frigida	-	76,714	42,118	254,428	41,931	507,581	-
N. gelida	-	76,714	21,059	-	-	253,790	-
N. grunowii	10,970,109	1,150,711	157,944	2,544,284	412,321	1,268,952	-
N. linearis	230,142	-	21,059	508,857	27,954	761,371	-
Pinnularia quadratarea	153,428	76,714	-	254,428	13,977	507,581	17,773
Pleurosigma longum	153,428	-	-	-	-	-	-
Rhabdonema arcuatum	76,714	-	-	-	-	253,790	-
Synedra tabulata	306,856	76,714	10,530	-	13,977	253,790	-
Tabellaria flocculosa	-	76,714	-	-	-	-	-
Chlorophyta	306,856	306,856	21,059	763,285	27,954	761,371	71,092
Chlamydomonas ballenyana	153,428	-	-	-	-	-	17,773
C. pulsatilla	153,428	230,142	21,059	763,285	27,954	761,371	53,319
Micrasterias sp.	-	76,714	-	-	-	-	-

Table 16. (cont'd.)

Sample No.	84-20	84-21	84-22	84-24	84-25	84-26	84-27
Chrysophyta	76,714	-	42,118	254,428	-	-	17,773
Mallomonas sp.	-	-	-	-	-	-	17,773
Phaeocystis pouchetii	76,714	-	42,118	254,428	-	-	-
Euglenophyta	-	-	10,530	-	-	-	-
Euglena schmitzii	-	-	10,530	-	-	-	-
Pyrrophyta	-	-	21,059	254,428	-	-	-
Goniaulax cysts	-	-	21,059	254,428	-	-	-

Table 17. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 2 - 7 August 1984.

Sample No.	84-29	84-30	84-31	84-32	84-35	84-36	84-37
Date	2-4 Aug.	2-4 Aug.	2-4 Aug.	2-4 Aug.	4-7 Aug.	4-7 Aug.	4-7 Aug.
Station depth (m)	30-39	31-40	30-40	32-42	33-40	31-38	31-38
Ice cover (cm)	0	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	9,915,005	302,037,478	414,072,312	271,596,170	564,406,127	366,351,800	519,951,592
Bacillariophyta	9,885,843	300,632,653	413,369,900	270,813,446	563,617,850	366,351,800	517,640,696
Centrales	9,506,737	274,643,384	378,951,677	260,294,378	546,538,520	347,835,823	495,456,097
Chaetoceros affinis	29,162	351,206	1,053,619	706,362	262,759	793,542	462,179
C. decipiens	388,824	11,238,604	17,209,112	9,535,886	34,158,657	17,722,434	10,167,942
C. furcellatus	8,787,413	254,273,415	351,557,581	243,694,872	494,512,253	320,590,888	473,271,497
C. holsaticus	-	-	351,206	-	-	-	-
C. lauderi	-	-	-	-	788,277	-	-
C. septentrionalis	-	351,206	1,756,032	1,765,905	4,992,419	2,380,625	3,235,254
C. spores	-	-	-	353,181	-	-	-
C. wighami	-	-	351,206	-	525,518	-	-
Coscinodiscus sp.	-	-	-	-	-	-	1,848,717
C. lacustris var. septentrionalis	-	351,206	-	-	-	-	462,179
Thalassiosira sp.	-	-	-	353,181	-	-	462,179
T. decipiens	301,338	8,077,747	6,672,921	3,884,991	11,035,878	6,348,334	5,546,150
T. nordenskioeldii	-	-	-	-	262,759	-	-
Pennales	379,106	25,989,269	34,418,223	9,889,068	17,079,330	18,515,977	22,184,599
Achnanthes taeniata	9,721	702,413	1,404,825	706,362	3,153,107	793,542	462,179
Amphora inelegans	-	-	702,413	-	-	264,514	-

Table 17. (cont'd.)

Sample No.	84-29	84-30	84-31	84-32	84-35	84-36	84-37
A. laevis var. laevissima	-	-	-	-	262,759	-	-
A. terroris	-	-	702,413	-	-	-	-
Ceratoneis arcus	-	-	-	706,362	-	-	-
Cocconeis pseudomarginata	9,721	-	-	-	-	-	-
C. scutellum	-	702,413	-	706,362	-	264,514	-
C. scutellum var. parva	-	-	-	-	-	264,514	-
Cylindrotheca closterium	-	351,206	702,413	-	-	-	-
Fragilaria sp.	19,441	-	351,206	-	-	529,028	2,773,075
F. bicapitata	-	-	-	-	262,759	-	-
F. islandica	9,721	-	-	-	-	-	-
F. pinnata	19,441	1,053,619	1,756,032	353,181	1,839,312	2,380,625	1,386,538
F. striatula	-	702,413	-	-	-	-	-
Gomphonema sp.	-	-	-	706,362	-	-	-
G. augur	-	-	-	-	-	-	924,358
G. exiguum	-	-	351,206	-	-	-	-
G. exiguum var. pachycladum	-	-	351,206	-	-	-	-
Grammatophora arctica	-	351,206	-	-	-	264,514	-
G. hamulifera	-	351,206	-	-	-	-	462,179
Gyrosigma fasciola	-	-	-	-	262,759	-	-
Navicula sp.	9,721	351,206	702,413	1,059,543	525,518	264,514	-
N. debilissima	-	-	-	-	525,518	-	-
N. directa	9,721	-	351,206	-	-	-	-
N. directa var. subtilis	-	-	-	353,181	262,759	-	-
N. granii	9,721	-	11,238,604	-	1,051,036	529,028	-
		-					

Table 17. (cont'd.)

Sample No.	84-29	84-30	84-31	84-32	84-35	84-36	84-37
N. peregrina	-	-	-	353,181	525,518	-	462,179
N. rhynchocephala	-	1,404,825	1,053,619	353,181	-	-	-
N. transitans	-	-	-	-	-	264,514	462,179
N. transitans var. derasa	9,721	351,206	-	353,181	262,759	-	462,179
N. valida	-	-	351,206	-	-	-	-
Nitzschia acicularis	-	351,206	702,413	-	-	529,028	924,358
N. cylindrus	243,015	16,155,493	13,345,842	3,531,810	6,831,731	8,199,932	11,554,480
N. frigida	-	-	-	-	-	1,058,056	-
N. grunowii	19,441	2,458,445	351,206	353,181	1,313,795	1,851,598	924,358
N. linearis	9,721	351,206	-	353,181	-	-	462,179
N. tergestina	-	-	-	-	-	264,514	-
Pinnularia quadratarea	-	-	-	-	-	264,514	-
Pleurosigma marinum	-	351,206	-	-	-	-	-
Rhabdonema arcuatum	-	-	-	-	-	-	462,179
Tabellaria fenestrata	-	-	-	-	-	264,514	-
T. flocculosa	-	-	-	-	-	-	462,179
Trachyneis aspera	-	-	-	-	-	264,514	-
Chlorophyta	29,162	1,053,619	351,206	1,412,724	-	-	2,310,896
Chlamydomonas ballenyana	9,721	351,206	-	-	-	-	-
C. pulsatilla	19,441	702,413	351,206	1,412,724	-	-	2,310,896
Chrysophyta	-	351,206	351,206	-	525,518	-	-
Dinobryon cylindricum	-	351,206	-	-	-	-	-

Table 17. (cont'd.)

Sample No.	84-29	84-30	84-31	84-32	84-35	84-36	84-37
Phaeocystis globosa	-	-	351,206	-	-	-	-
P. pouchetii	-	-	-	-	525,518	-	-
Pyrrophyta	-	-	-	-	262,759	-	-
Goniaulax cysts	-	-	-	-	262,759	-	-

Table 18. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 7 - 13 August 1984.

Sample No.	84-38	84-39	84-40	84-42	84-43	84-44
Date	7-9 Aug	7-9 Aug	7-9 Aug	9-13 Aug	9-13 Aug	9-13 Aug
Station depth (m)	32-39	30-37	31-37	31-40	31-39	28-37
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	550,757,820	569,538,925	462,538,344	290,220,504	348,198,375	243,275,641
Bacillariophyta	550,368,317	564,682,930	460,979,664	287,505,184	346,827,515	242,703,676
Centrales	526,998,118	544,565,233	441,496,162	277,662,148	337,916,925	234,696,169
Chaetoceros affinis	-	-	389,670	-	685,430	571,965
C. decipiens	21,422,688	26,361,120	8,572,741	8,845,378	5,140,724	5,719,647
C. furcellatus	493,500,825	503,636,126	422,792,000	263,386,129	327,635,477	220,015,742
C. septentrionalis	389,503	-	389,670	339,415	1,028,145	1,525,239
C. spores	389,503	693,714	-	339,415	-	1,334,584
Coscinodiscus sp.	-	-	-	-	-	381,310
C. lacustris var. *septentrionalis*	389,503	-	-	-	-	381,310
Thalassiosira sp.	-	-	-	339,415	-	-
T. decipiens	10,906,096	13,874,273	9,352,081	4,412,396	3,427,149	4,766,372
Pennales	23,370,199	20,117,697	19,483,502	9,843,036	8,910,590	8,007,507
Achnanthes taeniata	779,007	-	779,340	1,018,245	2,056,290	571,965
Amphiprora concilians	-	693,714	-	-	-	-
Amphora sp.	-	-	-	339,415	-	-
Cocconeis californica	-	-	-	-	-	190,655
C. scutellum	389,503	-	-	-	-	190,655
C. scutellum var. *parva*	-	-	-	-	-	190,655
Cylindrotheca closterium	389,503	-	389,670	-	-	-
Cymbella sp.	-	-	389,670	-	-	-

Table 18. (cont'd.)

Sample No.	84-38	84-39	84-40	84-42	84-43	84-44
Diploneis smithii	389,503	-		-	-	-
Eunotia sp.	-	-	-	-	-	190,655
Fragilaria sp.	3,116,027	-	-	339,415	-	-
F. bicapitata	389,503	-	779,340	-	-	-
F. pinnata	1,558,014	2,774,855	1,558,680	2,375,906	1,028,145	1,334,584
Gomphonema sp.	389,503	-	-	-	-	-
G. augur	389,503	-	-	-	-	190,655
G. exiguum var. pachycladum	389,503	-	-	-	-	-
Grammatophora arctica	389,503	-	389,670	-	342,715	-
G. hamulifera	-	-	779,340	-	-	-
Gyrosigma balticum	-	-	-	-	-	381,310
Navicula sp.	389,503	-	389,670	678,830	342,715	-
N. debilissima	389,503	-	-	339,415	685,430	-
N. directa	-	4,162,282	-	-	-	-
N. directa var. subtilis	-	-	389,670	-	-	-
N. granii	-	-	5,455,381	-	-	-
N. peregrina	-	-	389,670	678,830	-	-
N. rhynchocephala	389,503	1,387,427	-	-	-	-
N. transitans	389,503	-	-	339,415	-	571,965
N. transitans var. derasa	389,503	-	-	678,830	-	381,310
N. valida	-	-	389,670	-	-	-
Nitzschia acicularis	-	-	-	339,415	2,056,290	190,655
N. cylindrus	8,569,075	7,630,850	4,676,041	1,018,245	1,713,575	2,097,204
N. gelida	-	693,714	-	-	-	-

Table 18. (cont'd.)

Sample No.	84-38	84-39	84-40	84-42	84-43	84-44
N. grunowii	3,505,531	-	1,948,350	1,357,660	685,430	953,274
N. linearis	-	-	-	339,415	-	190,655
N. tergestina	-	2,081,141	-	-	-	-
Pinnularia quadratarea	389,503	-	389,670	-	-	190,655
Pleurosigma sp.	-	-	389,670	-	-	190,655
Rhabdonema arcuatum	-	-	-	-	-	190,655
R. minutum	-	693,714	-	-	-	-
Trachyneis aspera	389,503	-	-	-	-	-
Chlorophyta	-	3,468,568	1,558,680	2,036,490	1,028,145	571,965
Chlamydomonas sp.	-	-	-	678,830	342,715	-
C. ballenyana	-	-	-	-	-	190,655
C. pulsatilla	-	3,468,568	1,558,680	1,357,660	685,430	381,310
Chrysophyta	389,503	1,387,427	-	678,830	-	-
Phaeocystis pouchetii	389,503	1,387,427	-	678,830	-	-
Euglenophyta	-	-	-	-	342,715	-
Euglena schmitzii	-	-	-	-	342,715	-

Table 19. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 13 - 20 August 1984

Sample No.	84-47	84-48	84-51	84-52	84-54
Date	13-17 Aug	13-17 Aug	17-18 Aug	17-18 Aug	18-20 Aug
Station depth (m)	31-40	31-39	31-38	31-38	34-40
Ice cover (cm)	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	538,403,186	791,163,630	1,219,541,357	1,025,378,224	970,530,357
Bacillariophyta	534,631,535	790,319,272	1,218,367,592	1,024,202,332	967,389,482
Centrales	516,244,739	770,054,676	1,180,807,124	990,101,455	934,933,774
Chaetoceros affinis	1,414,369	1,688,716	4,695,058	7,055,355	30,361,791
C. decipiens	18,386,799	24,486,388	93,901,163	61,146,408	-
C. furcellatus	483,242,793	716,015,751	1,029,391,499	901,909,520	879,444,984
C. septentrionalis	1,414,369	2,533,075	32,865,407	5,879,462	1,046,958
C. spores	5,186,020	11,821,015	4,695,058	2,351,785	12,563,500
Thalassiosira sp.	-	-	8,216,352	-	1,046,958
T. decipiens	6,600,389	13,509,731	7,042,587	11,758,925	10,469,583
Pennales	18,386,796	20,264,596	37,560,468	34,100,877	32,455,708
Achnanthes taeniata	1,885,826	-	-	2,351,785	-
Amphora laevis var. *laevissima*	-	-	2,347,529	1,175,892	-
A. terroris	471,456	-	2,347,529	-	-
Campylodiscus sp.	471,456	-	-	-	-
Cocconeis californica	-	-	-	-	1,046,958
C. scutellum	-	844,358	2,347,529	-	-
C. scutellum var. *parva*	471,456	-	-	-	-
C. thumensis	471,456	-	-	-	-
Cylindrotheca closterium	-	844,358	1,173,765	1,175,892	-
Cymbella sp.	-	-	-	1,175,892	-

Table 19. (cont'd.)

Sample No.	84-47	84-48	84-51	84-52	84-54
Diploneis sp.	-	-	1,173,765	-	-
D. smithii	-	-	1,173,765	-	-
Fragilaria sp.	1,414,369	-	-	1,175,892	2,093,917
F. bicapitata	-	-	-	1,175,892	-
F. pinnata	2,357,282	3,377,433	1,173,765	1,175,892	7,328,708
Gomphonema sp.	471,456	-	-	-	-
Licmophora sp.	471,456	-	-	-	-
Navicula sp.	471,456	2,533,075	1,173,765	3,527,677	-
N. directa	-	-	-	1,175,892	-
N. directa var. subtilis	1,414,369	-	-	-	-
N. peregrina	471,456	-	1,173,765	2,351,785	-
N. transitans	-	844,358	-	-	2,093,917
N. transitans var. derasa	1,414,369	844,358	-	1,175,892	-
Nitzschia acicularis	471,456	-	-	-	1,046,958
N. cylindrus	3,771,651	9,287,940	17,606,468	12,934,817	8,375,667
N. grunowii	1,885,826	844,358	2,347,529	3,527,677	10,469,583
N. linearis	-	-	1,173,765	-	-
Plagiogramma staurophorum	-	844,358	-	-	-
Chlorophyta	3,771,651	844,358	1,173,765	1,175,892	3,140,875
Chlamydomonas sp.	942,913	-	-	-	-
C. ballenyana	1,414,369	-	-	-	2,093,917
C. pulsatilla	1,414,369	844,358	1,173,765	1,175,892	1,046,958

Table 20. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 18 - 24 August 1984.

Sample No.	84-55	84-56	84-58	84-61	84-62	84-63
Date	18-20 Aug	18-20 Aug	20-23 Aug	23-24 Aug	23-24 Aug	23-24 Aug
Station depth (m)	34-40	33-40	32-37	30-35	31-36	31-36
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	704,196,875	598,681,231	14,328,276	22,396,603	4,532,961	12,769,798
Bacillariophyta	704,196,875	595,736,208	14,311,826	22,230,527	4,461,651	12,698,723
Centrales	686,172,418	573,438,170	13,999,269	21,542,499	3,391,997	12,295,964
Chaetoceros affinis	-	2,254,306	16,450	166,077	47,540	23,692
C. decipiens	21,753,655	13,042,247	1,447,633	1,020,184	618,023	450,141
C. furcellatus	656,338,834	545,670,805	12,173,278	19,691,932	2,155,951	11,324,606
C. septentrionalis	-	-	65,802	166,077	71,310	47,383
C. spores	4,350,731	5,048,612	49,351	213,527	142,621	71,075
Coscinodiscus sp.	-	841,435	-	-	-	
C. lacustris var. *septentrionalis*	-	420,718	-	-	23,770	23,692
Thalassiosira sp.	-	-	16,450	23,725	-	23,692
T. decipiens	3,729,198	5,890,047	230,305	260,977	332,782	331,683
Pennales	18,024,457	22,298,038	312,557	688,028	1,069,654	402,759
Achnanthes taeniata	-	-	16,450	47,450	-	23,692
Amphora sp.	-	-	-	23,725	-	-
A. angusta	-	-	-	47,450	-	-
A. inelegans	-	-	-	-	47,540	-
A. terroris	-	841,435	-	-	-	-
Cocconeis sp.	-	-	-	-	23,770	-
C. pseudomarginata	621,533	-	-	-	-	-
C. scutellum	-	-	-	-	-	23,692

Table 20. (cont'd.)

Sample No.	84-55	84-56	84-58	84-61	84-62	84-63
C. scutellum var. parva	-	-	-	-	23,770	-
C. thumensis	621,533	-	-	-	-	-
Cylindrotheca closterium	-	420,718	32,901	23,725	-	-
Cymbella sp.	-	-	-	47,450	-	-
Diploneis smithii	-	-	-	-	-	23,692
F. pinnata	7,458,396	2,945,024	32,901	47,450	166,391	47,383
F. striatula	621,533	-	-	-	-	-
Gomphonema sp.	-	1,262,153	16,450	23,725	-	-
Navicula sp.	621,533	1,262,153	32,901	47,450	166,391	23,692
N. debilissima	-	420,718	16,450	-	-	-
N. directa	-	420,718	-	23,725	-	-
N. directa var. subtilis	-	-	-	-	71,310	-
N. granii	-	1,262,153	-	-	-	-
N. peregrina	621,533	-	-	-	-	-
N. transitans	1,243,066	-	-	23,725	-	-
N. transitans var. derasa	-	420,718	-	71,176	-	-
Nitzschia sp.	-	-	-	23,725	-	-
N. acicularis	-	1,262,153	32,901	23,725	23,770	-
N. cylindrus	4,350,731	4,207,177	-	213,527	261,471	47,383
N. frigida	-	841,435	-	-	-	-
N. gelida	-	420,718	-	-	-	-
N. grunowii	1,864,599	5,469,330	98,702	-	261,471	189,533
N. linearis	-	-	32,901	-	-	23,692
N. tergestina	-	841,435	-	-	-	-
Rhabdonema minutum	-	-	-	-	23,770	-

Table 20. (cont'd.)

Sample No.	84-55	84-56	84-58	84-61	84-62	84-63
Chlorophyta	-	2,945,023	16,450	118,626	47,540	47,383
Chlamydomonas sp.	-	841,435	-	-	-	-
C. ballenyana	-	841,435	-	71,176	-	47,383
C. pulsatilla	-	1,262,153	16,450	47,450	47,540	-
Chrysophyta	-	-	16,450	23,725	-	-
Phaeocystis pouchetii	-	-	16,450	23,725	-	-
Pyrrophyta	-	-	-	23,725	23,770	23,692
Goniaulax sp.	-	-	-	23,725	23,770	23,692

Table 21. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 2 -24 August 1984.

Sample No.	84-33	84-41	84-53	84-57	84-59	84-64
Date	2-4 Aug	7-9 Aug	17-18 Aug	18-20 Aug	20-23 Aug	23-24 Aug
Station depth (m)	20	20	20	20	20	20
Ice cover (cm)	0	0	0	0	0	0
Sedimentation rate (cells.m^{-2}.day^{-1})	21,446,892	79,512,820	15,447,322	16,399,717	4,638,242	3,595,208
Bacillariophyta	20,910,184	79,316,250	15,175,043	16,388,176	4,619,023	3,530,056
Centrales	19,278,590	72,927,704	14,902,764	16,041,946	4,484,490	3,304,984
Biddulphia aurita	-	-	-	11,541	-	-
Chaetoceros affinis	42,937	196,571	36,304	103,869	-	17,769
C. decipiens	558,177	4,029,698	1,016,506	1,546,490	243,444	23,692
C. furcellatus	18,011,957	65,654,590	13,087,515	14,045,357	4,125,731	3,115,451
C. septentrionalis	-	884,568	272,278	80,787	6,406	-
C. spores	21,468	98,285	181,519	103,869	12,813	47,383
C. wighami	-	196,571	-	-	-	-
Coscinodiscus lacustris var. *septentrionalis*	-	-	-	23,082	-	-
Thalassiosira sp.	-	-	90,759	-	6,406	-
T. decipiens	644,051	1,867,421	217,823	126,951	89,690	100,689
Pennales	1,631,594	6,388,546	272,279	346,230	134,533	225,072
Achnanthes taeniata	64,405	-	-	46,164	-	5,923
Amphora terroris	-	-	-	46,164	-	11,846
Cocconeis pseudomarginata	-	98,285	-	-	-	-
C. scutellum	-	-	-	-	12,813	-
C. scutellum var. *parva*	64,405	-	-	-	-	-
Cylindrotheca closterium	21,468	-	18,152	11,541	19,219	11,846

Table 21. (cont'd.)

Sample No.	84-33	84-41	84-53	84-57	84-59	84-64
Fragilaria sp.	-	393,141	18,152	-	-	11,846
F. bicapitata	64,405	196,571	-	-	-	-
F. pinnata	128,810	589,712	-	23,082	12,813	35,537
F. striatula	64,405	-	-	-	-	-
Gomphonema sp.	-	196,571	-	23,082	-	-
Grammatophora arctica	-	-	-	11,541	-	5,923
Navicula sp.	42,937	98,285	18,152	-	6,406	-
N. cancellata	-	-	-	-	6,406	-
N. debilissima	42,937	-	18,152	-	12,813	-
N. directa	-	-	-	11,541	-	-
N. granii	-	-	36,304	11,541	-	11,846
N. transitans	-	196,571	18,152	-	6,406	5,923
N. transitans var. derasa	85,873	-	-	-	-	5,923
Nitzschia acicularis	42,937	196,571	18,152	-	6,406	5,923
N. cylindrus	880,203	4,029,698	90,759	69,246	6,406	29,615
N. gelida	-	-	-	11,541	-	-
N. grunowii	64,405	294,856	36,304	80,787	44,845	76,998
N. linearis	21,468	-	-	-	-	-
N. tergestina	-	98,285	-	-	-	-
Pleurosigma marinum	-	-	-	-	-	5,923
Stauroneis smithii var. sagitta	21,468	-	-	-	-	-
Tabellaria fenestrata	21,468	-	-	-	-	-

Table 21. (cont'd.)

Sample No.	84-33	84-41	84-53	84-57	84-59	84-64
Chlorophyta	515,240	98,285	235,975	11,541	19,219	53,306
Ankistrodesmus sp.	407,899	-	145,215	-	-	-
Chlamydomonas ballenyana	21,468	-	36,304	11,541	6,406	17,769
C. pulsatilla	85,873	98,285	54,456	-	12,813	35,537
Chrysophyta	-	-	18,152	-	-	5,923
Phaeocystis pouchetii	-	-	18,152	-	-	5,923
Pyrrophyta	21,468	-	18,152	-	-	5,923
Dinophysis sp.	21,468	-	-	-	-	-
Goniaulax sp.	-	-	18,152	-	-	5,923
Unidentified	-	98,285	-	-	-	-

Table 22. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 31 January - 11 February 1985

Sample No.	85-5	85-6	85-8	85-9
Date	31 Jan-3 Feb	31 Jan-3 Feb	3-11 Feb	3-11 Feb
Station depth (m)	34-41	35-41	32-43	32-43
Ice cover (cm)	115	115	115	115
Sedimentation rate (cells.m^{-2}.day^{-1})	490,558	769,716	386,858	183,631
Bacillariophyta	480,919	764,159	373,745	178,384
Centrales	402,086	608,551	167,858	116,732
Chaetoceros decipiens	12,393	13,894	1,311	-
C. furcellatus	363,530	555,754	154,744	100,993
C. septentrionalis	2,754	6,947	-	3,935
Thalassiosira sp.	23,409	18,062	11,803	9,181
T. decipiens	-	13,894	-	2,623
Pennales	78,833	155,608	205,887	61,652
Achnanthes taeniata	2,754	11,115	3,934	-
Amphiprora sp.	-	-	1,311	3,935
Amphora laevis var. *laevissima*	1,377	2,779	3,934	-
A. terroris	4,131	2,779	3,934	-
Campylodiscus sp.	-	1,389	-	-
Cocconeis sp.	-	2,779	1,311	-
C. pseudomarginata	-	-	1,311	-
C. scutellum	-	-	-	1,312
C. scutellum var. *parva*	-	1,389	3,934	-
C. thumensis	-	1,389	-	-
Cylindrotheca closterium	1,377	-	-	-
Cymbella sp.	-	-	1,311	2,623

Table 22. (cont'd.)

Sample No.	85-5	85-6	85-8	85-9
C. affinis	1,377	-	5,246	6,558
Diploneis bombus	-	-	1,311	-
D. didyma	-	-	-	1,312
D. litoralis	-	-	-	1,312
D. smithii	1,377	1,389	1,311	1,312
Fragilaria sp.	-	1,389	-	-
F. bicapitata	-	1,389	-	-
F. pinnata	16,524	22,230	13,114	3,935
Gomphonema sp.	4,131	4,168	-	1,312
G. gracile	-	-	1,311	-
Grammatophora arctica	1,377	4,168	2,623	-
Gyrosigma fasciola	-	4,168	-	-
Licmophora sp.	-	-	1,311	-
Navicula sp.	2,754	18,062	11,803	9,181
N. algida	-	-	1,311	-
N. debilissima	-	2,779	3,934	-
N. directa	-	-	-	1,312
N. directa var. subtilis	2,754	-	-	-
N. grevillei	-	1,389	-	2,623
N. lineola	-	-	1,311	-
N. peregrina	-	-	2,623	-
N. transitans	-	1,389	-	-
N. transitans var. derasa	2,754	2,779	5,246	-
N. trigonocephala	1,377	-	-	-

Table 22. (cont'd.)

Sample No.	85-5	85-6	85-8	85-9
Nitzschia acicularis	2,754	4,168	-	-
N. cylindrus	7,229	11,115	5,246	11,808
N. frigida	1,377	6,947	-	3,935
N. grunowii	20,655	37,513	118,025	7,870
N. linearis	2,754	6,947	5,246	1,312
Rhabdonema arcuatum	-	-	5,246	-
Chlorophyta	9,639	4,168	10,491	3,935
Chlamydomonas ballenyana	9,639	-	6,557	3,935
C. pulsatilla	-	4,168	3,934	-
Chrysophyta	-	-	1,311	-
Dinobryon balticum	-	-	1,311	-
Cyanophyta	-	-	1,311	-
Lyngbya sp.	-	-	1,311	-
Euglenophyta	-	1,389	-	1,312
Euglena sp.	-	1,389	-	-
E. schmitzii	-	-	-	1,312

Table 23. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 13 - 21 March 1985

Sample No.	85-14	85-15	85-17	85-20
Date	13-18 Mar	13-18 Mar	18-21 Mar	18-21 Mar
Station depth (m)	36-42	37-43	35-43	36-44
Ice cover (cm)	147	147	147	147
Sedimentation rate (cells.m^{-2}.day^{-1})	20,808,467	13,021,052	851,771	848,893
Bacillariophyta	20,576,402	12,478,508	837,692	509,335
Centrales	10,210,845	9,843,297	703,942	353,706
Chaetoceros affinis	-	-	14,079	-
C. decipiens	77,355	-	7,039	7,074
C. furcellatus	9,824,070	8,990,728	665,226	336,021
C. septentrionalis	77,355	77,506	3,520	-
Thalassiosira sp.	232,065	542,544	7,039	7,074
T. decipiens	-	232,519	7,039	3,537
Pennales	10,365,557	2,635,211	133,750	155,629
Achnanthes taeniata	618,839	232,519	3,520	-
Amphiprora sp.	77,355	-	-	-
A. kjellmanii	77,355	-	-	3,537
Amphora sp.	-	77,506	-	-
A. laevis var. *laevissima*	696,194	77,506	-	-
A. terroris	-	-	-	7,074
Caloneis semiinflata	-	-	-	3,537
Cocconeis californica	-	-	3,520	3,537
C. pseudomarginata	77,355	77,506	-	3,537
C. scutellum	-	310,025	7,039	7,074
C. scutellum var. *parva*	77,355	-	3,520	-

Table 23. (cont'd.)

Sample No.	85-14	85-15	85-17	85-20
Cylindrotheca closterium	-	-	-	3,537
Diploneis sp.	77,355	-	-	-
D. litoralis	232,065	-	-	3,537
Fragilaria sp.	232,065	-	-	3,537
F. pinnata	232,065	465,038	52,796	28,297
Gomphonema sp.	77,355	77,506	-	3,537
G. augur	154,710	155,013	-	-
G. exiguum var. pachycladum	-	77,506	-	-
Gyrosigma fasciola	77,355	-	3,520	-
Licmophora sp.	-	155,013	-	-
Navicula sp.	154,710	155,013	3,520	3,537
N. crucigeroides	154,710	-	-	-
N. cryptocephala	77,355	77,506	-	-
N. debilissima	77,355	-	3,520	3,537
N. directa	464,129	77,506	3,520	-
N. directa var. subtilis	309,420	-	-	7,074
N. gastrum	-	-	10,559	3,537
N. grevillei	154,710	-	-	-
N. latissima	154,710	-	-	-
N. peregrina	154,710	-	-	-
N. rhynchocephala	77,355	-	-	-
N. transitans	464,129	-	-	3,537
N. transitans var. derasa	-	-	-	3,537
Nedium affinis	154,710	-	-	-

Table 23. (cont'd.)

Sample No.	85-14	85-15	85-17	85-20
Nitzschia acicularis	-	-	7,039	7,074
N. cylindrus	464,129	-	7,039	14,148
N. delicatissima	154,710	77,506	-	-
N. frigida	1,082,967	-	10,559	14,148
N. grunowii	-	77,506	10,559	14,148
N. linearis	3,403,615	77,506	-	3,537
Pinnularia quadratarea	77,355	77,506	-	-
Plagiogramma staurophorum	-	77,506	-	-
Pleurosigma longum	77,355	-	-	-
P. marinum	-	77,506	-	-
Stenoneis inconspicua var. *baculus*	-	-	-	3,537
Tabellaria fenestrata	-	77,506	-	-
T. flocculosa	-	77,506	3,520	-
Trachyneis aspera	-	-	-	3,537
Chlorophyta	154,710	465,038	14,079	290,039
Carteria vectensis	-	-	-	3,537
Chlamydomonas sp.	-	77,506	7,039	-
C. ballenyana	77,355	232,519	3,520	130,871
C. pulsatilla	77,355	155,013	3,520	155,631
Chrysophyta	-	-	-	3,537
Phaeocystis pouchetii	-	-	-	3,537

Table 23. (cont'd.)

Sample No.	85-14	85-15	85-17	85-20
Cyanophyta	-	-	-	42,445
Spirulina sp.	-	-	-	42,445
Pyrrophyta	77,355	77,506	-	3,537
Dinophysis sp.	77,355	-	-	-
Gymnodinium sp.	-	77,506	-	-
Peridinium sp.	-	-	-	3,537

Table 24. Sedimentation rates and species composition of phytoplankton contributed to the sediments in Frobisher Bay, 28 May - 5 June 1985.

Sample No.	85-25	85-26	85-29	85-30
Date	28 May-1 June	28 May-1 June	1-5 June	1-5 June
Station depth (m)	34-42	33-42	33-43	32-43
Ice cover (cm)	182	182	174	174
Sedimentation rate (cells.m^{-2}.day^{-1})	37,208,278	48,209,825	33,163,675	56,297,125
Bacillariophyta	36,598,305	47,687,697	32,998,682	55,141,466
Centrales	3,834,108	1,566,385	3,134,874	5,943,393
Chaetoceros decipiens	-	174,043	164,993	495,283
C. furcellatus	3,485,552	1,044,256	2,144,915	4,457,545
C. septentrionalis	87,139	-	164,993	495,283
Cyclotella sp.	87,139	-	-	-
C. striata	-	-	-	165,094
Thalassiosira sp.	174,278	-	494,980	330,188
T. decipiens	-	174,043	164,993	-
Triceratium arcticum	-	174,043	-	-
Pennales	32,764,197	45,121,312	29,863,808	49,198,073
Achnanthes taeniata	2,614,164	696,171	1,649,935	660,377
Amphiprora alata	174,278	-	164,993	495,283
A. concilians	-	1,218,299	-	330,188
A. kjellmanii	435,694	348,085	329,987	330,188
Amphora inelegans	-	348,085	-	165,094
A. laevis var. *laevissima*	261,416	870,213	-	660,377
A. terroris	-	-	164,993	330,188
Cocconeis scutellum	87,139	-	-	330,188
C. scutellum var. *parva*	-	-	164,993	165,094

Table 24. (cont'd.)

Sample No.	85-25	85-26	85-29	85-30
Cylindrotheca closterium	261,416	348,085	329,987	825,471
Cymbella sp.	-	174,043	-	165,094
C. affinis	-	174,043	-	-
Diploneis bombus	87,139	-	-	-
D. litoralis	261,416	522,128	329,987	1,155,660
D. smithii	87,139	-	-	-
Fragilaria sp.	958,529	348,085	329,987	165,094
Gomphonema sp.	261,416	522,128	989,961	165,094
G. augur	784,249	2,088,512	-	990,564
G. exiguum var. pachycladum	174,278	696,171	164,993	660,377
G. gracile	87,139	-	-	-
Grammatophora arctica	87,139	-	-	-
Gyrosigma fasciola	261,416	174,043	-	165,094
Navicula sp.	1,568,502	1,044,256	1,319,948	165,094
N. algida	87,139	-	-	-
N. crassirostris	87,139	-	-	165,094
N. crucigeroides	174,278	522,128	164,993	165,094
N. directa	435,694	696,171	494,980	-
N. directa var. subtilis	87,139	174,043	-	-
N. gastrum	-	870,213	164,993	165,094
N. gelida	-	-	329,987	-
N. grevillei	87,139	348,085	-	-
N. kariana	-	522,128	-	-
N. lineola	-	-	164,993	-

Table 24. (cont'd.)

Sample No.	85-25	85-26	85-29	85-30
N. peregrina	609,972	1,044,256	-	330,188
N. rhynchocephala	-	-	164,993	330,188
N. sigma	-	522,128	164,993	330,188
N. transitans	697,110	522,128	494,980	990,564
N. trigonocephala	174,278	174,043	164,993	-
N. trigonocephala var. depressa	-	348,085	-	-
N. valida	-	174,043	-	165,094
N. vanhoeffenii	-	-	164,993	-
Nitzschia acicularis	261,416	348,085	494,980	990,564
N. cylindrus	435,694	1,044,256	2,144,915	2,311,319
N. delicatissima	87,139	696,171	329,987	495,283
N. frigida	17,253,483	23,147,677	12,209,516	26,415,080
N. gelida	87,139	174,043	494,980	330,188
N. grunowii	174,278	-	494,980	-
N. linearis	2,527,025	2,436,598	2,309,908	6,108,487
N. linearis var. tenuis	261,416	-	-	-
Pinnularia quadratarea	87,139	-	-	330,188
P. quadratarea var. capitata	87,139	-	164,993	-
P. quadratarea var. densestriata	87,139	174,043	164,993	-
P. quadratarea var. stuxbergii	87,139	-	-	-
Pleurosigma sp.	-	-	-	165,094
P. longum	261,416	174,043	-	-
P. marinum	174,278	522,128	164,993	165,094
Rhabdonema arcuatum	-	-	164,993	165,094

Table 24. (cont'd.)

Sample No.	85-25	85-26	85-29	85-30
Stauroneis quadripedis	-	1,740,427	2,309,908	660,377
Stenoneis inconspicua var. *baculus*	-	174,043	-	330,188
Synedra sp.	-	-	-	165,094
Chlorophyta	435,695	348,085	164,993	825,471
Chlamydomonas sp.	87,139	-	-	825,471
C. ballenyana	174,278	348,085	-	-
C. pulsatilla	174,278	-	164,993	-
Pyrrophyta	174,278	174,043	-	330,188
Dinophysis sp.	87,139	-	-	-
Gymnodinium sp.	87,139	-	-	165,094
Prorocentrum sp.		174,043	-	165,094